AUT wants evidence made public

by Ngaio Crequer

The Association of University Teachers has proposed that all written evidence to the Swinnerton-Dyer committee on London University shy be made public.

It also wants to know on what financial basis the committee of inquiry can be subsumbled. The committee has told all schools it wants to make "large financial savings" and has issued detailed questionnaires which asks which subjects they would be willing to shed, which areas will it be difficult to attract good quality students, and whether departments could be merged with other schools.

Some schools have been critical of the way the questionnaire has been formulated and will merely respond in a general way to the theme of the questions.

Professor Ralf Dahrendorf, director of the London School of Economics, said this week that his response to the committee would be "to put our own house in order. I will tell them that. I will send them a letter telling them what is in our press release". This indicates the new courses and financial cutbacks authorized on by the school to solve the problems raised by the cuts and the overseas students policy.

Sir Richard Way, principal of Kings College, said he interpreted the questionnaire as background and intended to give a general reply, with comments on unusual departments.

"There are some questions like, 'which subjects . . . are vital to your academic well-being and distinction?', which are impossible to answer", he said.

At the Institute of Education a working party has been set up to respond to the general line of questioning using the questionnaire as a guide.

The questionnaire asks whether on present financial trends schools can afford to teach all the subjects they now teach. Are there any which, though desirable on academic grounds, should be curtailed because of their high proportionate cost?

Could the number of departments be reduced by inter-school amalgamation? Is any research being duplicated in another school. Would there be academic merit or savings in amalgamation?

If subjects are heavily over subscribed, is the quality of applications inferior? The schools have also been asked to say whether any of the university's central services could if necessary be wound up.

Huddersfield offers an olive branch to new Labour council

by Paul Flather

The governors of Huddersfield Polytechnic have invited Kirklees Council to make a joint approach to the Department of Education and Science to appoint a person of high standing to arbitrate and mediate in the dispute between the college and the local authority.

The invitation comes just a week before Kirklees councillors meet to appoint a completely new set of representatives to sit on the polytechnic board of governors.

The council is now controlled by Labour following last week's municipal election results. Labour has always remained the keenest of the three major parties to press home changes in the way the financial affairs of the polytechnic are run.

Reforms were demanded by the council after the publication last January of an audit report which accused senior polytechnic staff of maladministration and a lack of accountability. The findings of the report have been challenged by the governors.

Councillor John Mervagh, who is set to become the new chairman of the council education committee, said the local authority was now anxious to resolve the matter domestically rather than nationally.

"We very much regret that all this has dragged on so long. We hope the new governing body which is appointed will act as a broom and sweep clean the problem." He said the local authority was still waiting for answers to 40 detailed questions put to the polytechnic director on the affairs of the college.

Both sides have now appealed separately for DES Intervention, but it is unlikely that the new council will now want to back a joint appeal suggested by the present governors.

Although DES officials have been closely watching developments in Huddersfield it is not clear how the department could intervene if it wanted to. There is no precedent for such a step and no clear legal procedure for it to over-rule articles of government which give control to the governing body.

Meanwhile informal meetings between council officers and polytechnic officers aimed at producing a jointly agreed report, have now been adjourned until the new governing body is selected.

The present chairman of the governors, Mrs Jane Carter, who has always strongly backed the polytechnic is one member who might be replaced on the new body. Last week she had a brief meeting with Dr Rhodes Boyson, Under-Secretary of State for Higher Education.

In a statement this week she said that only someone appointed by the DES would be able to act independently to resolve the dispute. Any report produced on the experiences of Huddersfield and the "problems caused by a convoluted system of financing and controlling polytechnics" would have national significance, she said.

Technical training 'neglected'

by Charlotte Barry

Misuse of resources has led to a neglect of technical education and a coordinated programme of training should be set up immediately according to Mr Jack Fuller, principal of Waltham Forest College, Essex.

Writing in the spring bulletin of the National Council for Educational Standards *Approaches to the 80s*, Mr Fuller attacks the universities.

"The autonomy of universities has enabled them to develop in directions that reflect the drive of their most forceful leadership, with little (if any) thought to the employment prospects of their students," he writes.

"Fine, a degree for its own sake, but in a near bankrupt society crying out for technical skills, should higher education be allowed to mount courses without thought to employment and society's needs?"

Mr Fuller also criticizes universities and local education authorities of being shy of creating redundancies and rationalizing courses so resources can be allocated instead towards technical training.

"Some teaching staff in universities and polytechnics do little or no teaching at all and have time to take on a second job, consultancy or disappear abroad for weeks. Much could be saved if everyone had to do a full days work", he claims.

Mr Fuller recommends the setting up of a coordinated programme of training, integrating the resources of I.t.e.s, the Manpower Services Commission and the Industrial Training Board, with investment in modern techniques. "More training, more recognition of the nation's needs and more respect for the artisan is essential—now", he says.

Firms report trade boost from overseas students

New evidence is emerging from British companies abroad showing the benefit to the nation's trade from taking in overseas students.

A number of large firms are contributing to a study being carried out by Professor Mark Blaug at the University of London Institute of Education. Initial replies from foreign subsidiaries in a wide range of countries supports the argument, often discounted by ministers, that overseas students bring trade benefits later in their careers.

Most striking are the results obtained by Imperial Chemical Industries from six of its subsidiaries in Asia and Africa. Senior managers in all six wrote to Dr Kenneth Everard, ICI's education and training manager, testifying to the favourable attitudes of counterparts educated in Britain.

The countries concerned—Indonesia, Japan, Malaysia, Singapore, Pakistan and Nigeria—include two of the largest providers of overseas students. Nigeria, with more than 6,000 students in Britain in 1977, is one of the examples regularly cited by Dr Rhodes Boyson, under-secretary of state for higher education, of a country whose attitude to Britain does not reflect the contribution made to the education of its people.

But ICI's chief executive there, a businessman with 36 years' experience of overseas trade, wrote that "other things being equal, and sometimes when they are not, former students tend to favour Britain". His counterpart in Japan noted a similar attitude there since those educated in Britain consider they have a debt to repay.

Dr Everard said it was difficult to quantify the benefits but the managers all agreed that there were real trade advantages flowing from former students. "I think it is virtually impossible to show an unmistakable cause and effect relationship because the decision-making process is usually so complex", he said.

"We are reduced to an informed assessment of the situation. It shows, as we suspected, that the Government is taking a steamroller to crack a nut in raising the fees as they have."

Mr Michael Bury, director of education, training and technology at the Confederation of British Industry, said there was no doubt that there was a close link between trade and industrial training of overseas students. It was more difficult to

'Excess payment' plan urged

Dr Rickett "imaginative short-term solutions".

The Government is being urged to consider special excess payments as one way of encouraging trainee teachers to opt for subjects of particular shortage such as physics, chemistry or craft and design.

Dr Raymond Rickett, the director of Middlesex Polytechnic and chairman of the Committee of Directors of Polytechnics, said this week that really imaginative solutions were needed to combat the serious shortages of teachers in some subject areas.

He said he was disappointed that the Clegg Commission had not formally recommended differential rates of grants and pay for trainee teachers opting for certain crucial science subjects. Market-place laws were needed in the short-term.

Students training for teacher education had fallen dramatically this year by about 30 per cent from 9,000 to about 6,000. But while 20 per cent were training in physical education or movement studies, just 22 were learning to teach physics and chemistry.

Dr Rickett said: "What those figures show is that in three or four years headmasters will have just 22 teachers apart from postgraduates to meet all the requirements.

"It is all very well looking for solutions along the Flanagan model in the long-term, but we need really imaginative short-term solutions such as excess payments or differential grants."

He urged senior administrators to give the problem top priority. In-service training for higher national certificate scholars was another step suggested by Dr Rickett.

"This is the most serious problem on the immediate education horizon. You just cannot keep on the pressing on the pump and wait the ducks run dry of what they really need", he said.

Lecturers' pay: both sides 'confident'

by Peter David

Employers and union leaders met in London yesterday in new talks to resolve the polytechnic and college lecturers' pay dispute. Last week's meeting of the Burnham further education committee broke up after the employers side refused to make an offer for 1980-81 because of the impasse reached in negotiations with schoolteachers.

Before yesterday's meeting both sides said they were confident that progress could be made both on implementation of the Clegg recommendations and on the 1980-81 pay claim. Following a 13 per cent offer to schoolteachers at the end of last week, the way was now clear for an offer to be made to lecturers.

The negotiators were also optimistic about the Clegg recommendations. They hoped it would be possible to reach a provisional agreement on the Clegg pay scales and on a small increase in the proportional lecturer 2s.

The fate of part-time lecturers was likely to prove a more contentious problem. The union side wants parttimers who do a substantial amount of work to be given security pro rata equivalent, while the employers continue to press for improvements in the existing hourly payment arrangements.

In Scottish colleges of education and central institutions have angrily rejected management pay proposals at their first meeting following the Clegg report, reports Olga Wojtas.

Management proposals have been based on the recent Scottish teachers' Salaries Committee settlement for schoolteachers and the further education sector, which the colleges and central institutions see it as an underhand attempt to merge the three separate negotiating bodies into one.

There have been disagreements over what Clegg's intentions for Scotland were, with the unions wanting a direct translation from English scales to Scottish scales, and the management proposing flat percentages modelled on the teachers' settlement.

The offer at the meeting of the central institutions academic staff salaries committee would have meant increases of around 17.5 per cent for the majority of the staff, and the management's offer to the colleges rose in the course of the meeting from 17.8 per cent across the board to 18.2 per cent. Last week's STSC settlement gave the further education sector 18.2 per cent across the board.

The college and central institution unions want increases ranging from around 18 to 20 per cent for different scales.

Mr Jack Dale, secretary of the Association of Lecturers in Scottish central institutions, said: "It is offensive of the management to seek to impose on us the distribution agreed by a body in which we had no representation. Since we are a sovereign body there is no reason why we should confirm to anyone else's calculations." Unusually, both the association and the joint negotiating committee for the colleges of education met on the same day, since the Scottish Education Department is represented on both management sides and the same people would normally attend both meetings.

The unions feel this was a surreptitious attempt to bring both bodies into line with the STSC. Since the Haughton Report, there have been suggestions that there might be one umbrella negotiating body, but the colleges and the central institutions have always called for a full investigation of the implications first.

NEXT WEEK

New economic world order
Northern College
Lord Crowther-Hunt on bureaucracy
Education in the EEC
How to sack university teachers
Politics books
Fine art in Peking

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Councils demand power in polys

by Peter David

Britain's local education authorities are to ask the Government for sweeping new powers to intervene in the management of polytechnics and colleges. They are compiling evidence of maladministration by institutions to include in a submission to Mr Carlisle, Secretary of State for Education and Science.

Their demands set out in a document approved last week by the Council of Local Education Authorities, include taking over final responsibility for setting college constitutions, which at present have to be approved by the Department of Education and Science.

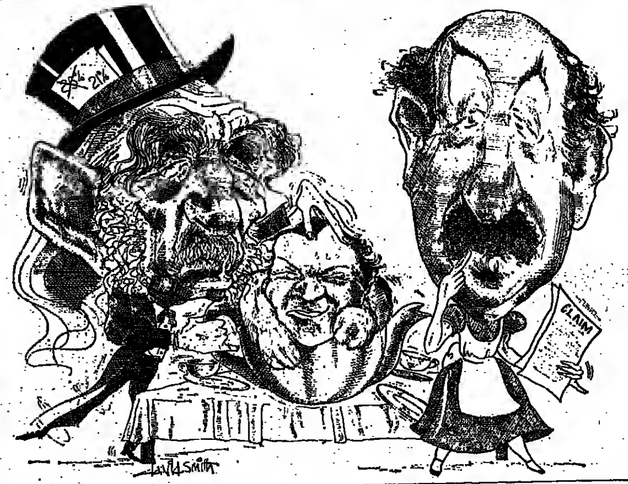
The document says that a number of local education authorities have experienced polytechnic governing bodies which have condoned overspending or sanctioned excessive "luxury spending" on behalf of principals and directors. One reason is that the instruments of government approved by the DES over the past 12 years have been too prescriptive and have ceded too much independence to the institutions.

"CLEA believes that the strict letter of the articles of government of many colleges seriously impedes the effective management of higher education institutions and, because authorities at times feel the need to act in breach of those terms, they act as points of conflict with teachers and others with whom members and officers of local education authorities need and wish to act in harmony," the document says.

The document says that local authorities do not want to take over the detailed daily running of institutions. But it lists four areas where local authorities, as the responsible elected bodies, should have substantial "reserve powers" to intervene in polytechnic and college affairs. They include:

- Power to change college budgets in the middle of year and not just during the annual budget approval;
- Power to intervene directly in the approval of courses to supplement an existing right to determine the "general educational character" of institutions;
- Power to act as the undisputed legal employer of all polytechnic staff, with responsibility for redundancy, redeployment, discipline and health and safety;
- Power to intervene in detailed financial administration in cases of "dubious financial management".

The council is to seek a meeting with Mr Carlisle to press its case.



Clegg chaos overshadows lecturers' pay

Pay negotiations for university and polytechnic lecturers are in confusion as a result of the misfortunes befalling the Clegg commission on pay comparability.

The Association of University Teachers is increasingly likely to withdraw from Clegg both its 1980 pay claim and the balance of the 1979 settlement, which is payable in October. The outstanding issues would then be settled in traditional negotiations.

At its council in Liverpool last weekend the AUT authorized its negotiators to withdraw from Clegg if necessary, and pursue a payment in October of at least the same figure (17 to 22 per cent) as that awarded by Clegg to the non-university sector.

A major reason for the AUT's disenchantment with Clegg is a recent announcement that it would take up to 18 months to produce a thorough report on university lecturers' pay. The union is also perturbed by the chapter of errors and counter-errors arising from the commission's report on pay for public sector lecturers and school teachers.

Leaders of the National Association of Teachers in Further and Higher Education are convinced that the original Clegg mistake, which resulted in recommending 4 per cent too much for teachers is cancelled out by another one, detected by the independent research organization, Income Data Services.

In a letter to Mrs Thatcher, Professor Clegg said the first error had arisen because he had failed to take into account salary increments received by graduates entering teaching but not those entering industry. NATFHE believes this is balanced by the commission's failure to notice that graduate teachers "lost" a year's pay through their extended education and training.

Professor Clegg has doubled that there is a second error, but talks on pay have reached stalemate.

The management panel of the Burnham committee was to meet yesterday to decide whether to stand by their offer or attempt to reclaim any of the increases erroneously recommended. The 1979 salary scales have already been ratified.

Mr Peter Dawson, Natfhe general secretary, said: "We know the management side has said that in the 1980 negotiations it will be taking into account any Clegg error. We do not think there is any such problem and think we will be able to demonstrate there is not."

Staff belonging to the Association of Lecturers and Colleges of Education in 10 colleges of education in Scotland are to take industrial action from June 5 unless they receive a better pay offer. The association has rejected an offer of 15 per cent and is seeking at least 20.6 per cent.

Closure threat to four Lancaster departments

by Ngaio Crequer

Closure of four departments and the Centre for North West Regional Studies at Lancaster University has been recommended by a working party chaired by the university's vice-chancellor.

Phasing out within three and two years of the Russian, Central and South East European Studies, Arabic and Islamic Studies, and European Studies departments is proposed.

Staff would be switched to other departments although the working party's report does not specify how this would be done. Some students who have already been offered places for the next academic year will have to go elsewhere.

Although the university stresses that the document A *Strategy* for the 1980's is consultative, it carries the weight of vice-chancellor Professor Philip Reynolds and his senior colleagues. The proposals will be discussed in departments before going to Senate, then to boards of studies and finally to an extraordinary meeting of Senate on June 11.

Professor Reynolds set up the committee as almost one of his first acts after taking up the job. He and senior colleagues undertook a searching review of every department in the university and the need for rationalization and the new fees called for overseas students.

The document does not say how much the closures are intended to save but staff say that figures they have been given have ranged from £20,000-£34,000.

It is proposed that the Russian department be phased out over four years and students already accepted for this year will have to go elsewhere. The working party says it was looking at the department before the University Grants Committee's report on Russian studies was published. Lancaster cannot stake a claim for being one of the stronger centres of Soviet studies.

The department of Arabic and Islamic studies had previously been funded by the University of Kuwait but that support ended last year. The working party feels it cannot support the department and recommends no further admission.

Central and South East European Studies has the lowest staff-student ratio in the country and takes between a quarter and a third of all national applications. The working party states there is none better established outside London and the library, the Comenius Centre, is one of the best in the country.

Although the department has an international reputation, the document states that "with the greatest reluctance" it cannot recommend continuation in its present form. But every effort will be made to sustain the library and Czech teaching.

continued on back page

MPs call for new minister

by John O'Leary

Substantial new bursary funds are needed to safeguard the number of students coming to Britain from poor countries, two all-party committees of MPs said this week.

Reports by the Select Committee on Education and the Foreign Affairs Committee were both highly critical of the Government's handling of overseas students' fees and called for responsibility for the group to be taken out of the hands of the Department of Education and Science.

Future subsidies should be borne on the aid budget and not concealed within the services administered by the DES, MPs on both sides agreed. The Foreign Affairs Committee went further in calling for a Minister at the Foreign and Commonwealth Office to be given specific responsibility for overseas students and supporting demands for an advisory committee on the subject.

The two committees believe that the savings sacrificed in exempting EEC students from the new fees would have been better spent on those from the poorest nations. While not opposing the new scale of fees, ranging from £2,000 to £5,000 per year, the committees want new talks on the whole issue based on a White Paper.

Successive governments are blamed for "drift and infirmity of purpose." In their handling of overseas students,

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The THES

The Times Higher Education Supplement was not published last week because of the refusal of some members of the National Graphical Association to accept changes in production schedules made necessary by the TUC's day of action. We apologize to readers and advertisers. As a result the classified advertising appears in two sections. The first, which would have been published last week starts on page 23, and the second, on page 23.

Councillors back streamlined body

by John O'Leary

Radical proposals for the formation of a single body to represent polytechnic and college heads have won the support of local authority leaders.

The Council of Local Education Authorities is to seek talks with a range of organisations in an effort to simplify the process of consultation and representation. The mechanics of the operation will be left to CLEA's new advisory body on higher education.

Possible participants in the talks would include not only the polytechnic directors and the two college principals' organisations, but also the Standing Conference of Regional Advisory Councils and the Association of Colleges in Further and Higher Education.

The new organization would have no trade union function and would be funded by the local authorities, possibly through college budgets. It would represent the interests of all directors and principals concerned with Advanced Further Education.

A recommendation to open discussions on the formation of a joint body was put to CLEA in a paper by Mr Gordon Cunningham, Education Officer of the Association of County Councils.

It came as a result of renewed requests from the Standing Conference of Directors and Principals of Colleges and Institutes in Higher Education for recognition and financial support comparable to that accorded to the Committee of Directors of Polytechnics. A previous request was turned down three years ago.

With funding for the CDP secretariat approved for another year at last week's meeting, the principals' bid for financial support stood little chance of success. The secretariat will cost more than £40,000 this year and Mr Cunningham's paper pointed out that the CDP was "unique in being an employee body (albeit at non-management level) which draws financial support indirectly from LEA budgets".

However, the establishment of a new joint body would be welcome consolation for the Standing Conference, which has argued for such a change for some time. The idea has been resisted by the CDP which has preferred only to hold occasional talks on specific issues. Mr Cunningham's paper recognized that the directors would wish to preserve their identity either outside or within any new group.

The joint body would also subsume some of the functions of the Association of Principals of Colleges, which would maintain its trade union role manifested in its representation on the Burnham Further Education Committee. CLEA was also recommended to consider a structure which allowed for the continuation of financial support for the CDP.

Further talks on the issue of representation have taken place last week between officers of the Standing Conference and senior civil servants at the Department of Education and Science. Mr Neil Merritt, chairman of the Standing Conference, said he had been encouraged by progress made at the meeting and that contact would continue next month.

Middlesex Polytechnic's tennis team took a look at Forest Hills during a recent tour of America when they won three out of five matches against university opposition. The Middlesex players are making a name for themselves in the tennis world—they have won the British polytechnics singles championships for the last two years and have been European universities champions.

Guidelines on training courses for unemployed 'unacceptable'

by Charlotte Barry

Proposed new guidelines for preparatory training opportunities courses for people at the bottom of the unemployment pile are totally unacceptable in their present form, according to the National Association of Teachers in Further and Higher Education.

NATFHE, along with the Association of Adult and Continuing Education, is seeking a delay in publication of the guidelines and an urgent meeting with the Training Services Division of the Manpower Services Commission.

The guidelines, which are for the MSC's regional staff, have taken two years to prepare. A draft, which has been drawn up from a 1978 report on pre-TOPS courses compiled by a joint working group of the former training services agency and the Adult Literacy and Resource Agency, has been sent to interested agencies for comment.

Pre-TOPS courses are aimed at unemployed workers over the age of 19 whose standards of basic communication, numeracy and literacy skills prevent them from obtaining or keeping a job or qualifying for vocational employment. They are provided full-time in further education colleges and adult education centres and are funded by the TSD.

Although welcoming the guidelines for recognizing the importance of including numeracy, social and life skills in pre-TOPS courses and considering staff/student ratios, NATFHE says that they will not be acceptable to the education service for a number of reasons.

The least educated people in the community, who are likely to have the most serious, long-term unemployment problems will be excluded because the guidelines limit the average length of course to 13-18 weeks, with 26 weeks the maximum.

The union also objects strongly to what it describes as the "totally prescribed method" of course administration and control", and criticises the guidelines for failing to deal adequately with the needs of those learning English as a second language.

● A cut in the number of places on pre-TOPS courses in the Manchester area from 220 to 90 and a reduction in course length from 36 weeks to 12 is causing widespread concern, according to the Adult Literacy and Basic Skills Unit.

From September north Manchester will have no courses at all in spite of long waiting lists for places in an area already hard hit by unemployment.

"In 1979 between 2,000 and 2,500 adults were receiving help on pre-TOPS courses, and if the situation in Manchester is any indication, it is likely that this number will soon be halved", ALBSU says in its latest newsletter.

"All this is at a time when about a quarter of all unemployed people have been unemployed for over a year and when a significant number of these long-term unemployed are likely to have literacy and numeracy needs", the unit adds.

● The full report of the Adult Literacy Unit for 1978/79, which has already been circulated in an abridged form, was published by the HMSO this week. ALU, which was set up in 1976, was replaced by the Adult Literacy and Basic Skills Unit earlier this year after the Government acted on recommendations in the report.

GMC issues statutory new rules

New recommendations for organizing university medical education were issued last week by the education committee of the General Medical Council—and for the first time these proposals will have statutory force.

Under the Medical Act, 1978, the committee was set up and given special powers to ensure basic standards of medical education in Britain. These highlight the extent of knowledge and skill, the standard of proficiency, and the patterns of experience that are needed for medical qualifications to be recognized.

Previous—but less stringent—guidelines have been issue by the GMC in the past and several new trends are noticeable since the last were published in 1967. In particular, the "Recommendations on Basic Medical Education" stress greater importance of teaching and instructing in general practice.

There is also more emphasis on integration of clinical and preclinical studies and of teaching different disciplines.

"The council wishes to encourage integrated and interdisciplinary teaching throughout the undergraduate curriculum", the committee report states. In particular, it welcomes moves to introduce clinical instruction early in medical courses.

The committee also warns that students' factual load in learning and memorising basic sciences should not interfere with the need to foster critical study of principles. Students should also learn to work independently and should be given time for private study and self-education.

"It is also recommended that he be given increasing supervised clinical responsibility during the last two years of training", the report adds.

The report also suggests that medical students could participate in research projects under supervision, prepare essays or dissertations or work on study which could lead to Honours BSc or B.Med. Sci. degrees.

Medicine and surgery should also be introduced less as separate disciplines than as different facets of "medicine in the wider sense", the report adds.

"The council regards clinical clerkships as the indispensable methods of clinical teaching" the committee states.

MSC considers proposals to restructure schemes

by Patricia Santinelli

Proposals to restructure completely special programmes for the unemployed are to be discussed by Ministers and the Manpower Services Commission.

The proposals, which are for the creation of two new programmes similar to the Youth Opportunities Programme in structure, one covering the 16 to 24 age group and the second of a more temporary nature specifically for adults between 45 to 50 and over, are said to have arisen directly from concern over the massive rise in unemployment in both age groups.

Ministers are believed to be extremely worried at the sharp rise in unemployment of adults over 19, which represents the bulge working its way through. Currently this age group is dealt with through the Special Temporary Employment Programme. Moreover, they are disturbed by the rise in long-term unemployment of the 45 to 50 age group and beyond.

Their thinking is that both groups would profit from offerings of the type made under YOP, which so far has provided a mixture of education and training to unemployed youngsters between 16 and 18.

No decision is expected until the autumn, when a review of special programmes currently being undertaken by the Commission is completed. This will coincide with the period when the budget of the Commission and Special Programmes Division for 1981 is discussed and available resources become known.

The new programmes could not be introduced in April 1981, with the next stage in development, to effectively fulfil the wise of Ministers to put a Tory stamp on special programmes.

It is also understood that if the new programmes come into being they will have a high concentration of offerings on the lines of Work Experience on Employers' Premises. This is because both Ministers and the Commission believe the school leavers now becoming unemployed are not the less able but those reasonably able to hold down a job.

Pressure group calls for plan to expand apprenticeships

An expansion of apprenticeship schemes for young people is called for in a report by the Action Society Trust this week.

The move would help ease youth unemployment and the transition from school to work says the report *Youth Unemployment and the Bridge from School to Work*, funded by the Anglo German Society and edited by Mr Jo Grimond MP. The study concentrated on the level of youth unemployment in Western Europe and its relation to the education system.

It points out that high apprenticeship countries such as Germany have been suffering much less from the high level of unemployment.

"Therefore steps must be devised to enable Britain to make a "sea change" for its present place among low apprenticeship countries to a new place among high ones. With the emphasis that these apprenticeships must be restricted to traditional largely male ones such as bricklaying but must include the same vast range as for example the 400 in Germany", it says.

The report proposes a system of youth training allowances on the lines of those currently paid to youngsters on the Youth Opportunities Programme should be extended to cover the entire age group across the board.

"We would prefer an arrangement under which the allowance is payable to all those in the 16 to 18 age group including those who have chosen to remain at school, but we would settle for allowances which those at school would forego," says the report.

The cost of introducing such a scheme with 450,000 young people staying on at school and paid the 40 a week would be around £500m. This would be much reduced if the allowances were paid only to those between 16 and 18 who had left school already and might eventually even represent a saving.

The report adds that a third additional solution to easing the transition from school to work, particularly for those at the lower academic range, would be changes in present school attendance requirements.

● Introduction of the Certificate of Extended Education for non-academic single year sixth formers should be frozen while work is undertaken on a comprehensive curriculum and certification structure for the 16 to 19 age group, says the Association of Colleges for Further and Higher Education in response to the Keohane and Mansell proposals for pre-employment courses at the plus.

History chair problem solved

Oxford University has solved the problem of filling the vacant chair of Regius professor in modern history by appointing another Oxford history professor who already receives the £14,000 a year salary attached to the chair.

Professor Hugh Trevor-Roper, currently the Oxford professor of the history of war at the university, has been appointed this week to succeed Lord Dacre, formerly Professor Hugh Trevor-Roper, who retires on September 30.

The university has a moratorium on all new appointments and there had been doubts about whether it could have overturned its own policy even for such a prestigious appointment as the chair in modern history.

Lord Dacre announced his retirement to become master of Pembroke College, Cambridge, last January, and an announcement from the Prime Minister's secretary of appointments, had been expected sometime last month.

The university will now have the difficulty of finding a new professor of the history of war. But it will be easier to clear that chair vacant until the moratorium expires next year.

Students boycott meeting in Prague

by Paul Flather

The National Union of Students is boycotting an international conference of European students unions to be held in Prague in June, but at the same time the NUS has offered to host next year's conference in London.

The reason is the NUS's refusal to recognize the official Czechoslovak students' union, the CSVU, which was set up after the purges that followed the collapse of the Dubcec regime in 1968. It will be the first time for 10 years that the NUS has not attended the conference, which represents more than 20 million students from 20 countries.

Mr Stuart Appleton, head of the NUS international section, said: "We have never recognized the existing students' union. We see it as representing all that went wrong when the Russians invaded after the 1968 Prague Spring."

But NUS representatives attended a briefing session to discuss the agenda for the forthcoming conference in Prague. Working with the Swiss and French students' unions, the NUS is trying to make the conference discussions more open and practical.

"We suggested that the conference should be broken up into smaller working groups to discuss practical matters and not waste time on some state of the world communiqué—and it seems the Czechs have agreed", said Mr Appleton.

In the past the conferences have looked at academic exchanges, the recognition of different degrees and diplomas, and European institutions of Higher Education. This year's conference is set to discuss detente and disarmament, the relationship between Europe and the Third World, and a European Charter of Student Rights.

Conferences are held alternatively in the Eastern bloc and in West Europe. The last Conference was in Dublin in January 1979; this conference was delayed six months because of the objection of NUS, the largest national union, to CSVU.

The NUS is sending representatives to attend the Canadian national students union conference in Halifax, Nova Scotia, and a preparatory conference on world disarmament in Helsinki.

● Students have been urged by the NUS executive this week to help raise funds to support British athletes who will be going to Moscow for the Olympic Games in spite of government opposition.

Mr David Aaronovitch, the NUS president-elect, said: "We are responding to an appeal from the British Olympics Federation which has lost other sources of funds. We do not believe the athletes, who include many students, should be penalised."

With Edinburgh Castle as backdrop, Norwegian students—mostly from Heriot-Watt University—celebrated their national constitution day last weekend. Their procession along Princes Street ended with dancing in the gardens.

ILEA defends past success record

by John O'Leary

The service provided by the Inner London Education Authority gives more cause for pride than apology, says the authority's official submission to the ministerial inquiry into its future.

A detailed examination of the work of the ILEA, approved by this week's meeting of the authority's education committee, claims that its policies have been effectively planned and carried through.

It concludes: "If the matter is fairly examined, a single, unified education service for Inner London will be seen, as it has been seen on the previous occasions when the issues have been carefully studied, as incomparably the most efficient way of dealing with the changing educational needs of the city."

The report, written by Mr Peter Newsom, the ILEA education officer, defends the authority's record on standards and insists that the break-up of the ILEA would be expensive and inefficient. And it points out that the high cost of running the authority derives mainly from the policies pursued, rather than from the structure itself.

Criticising the findings of the Baker Report, which advocated the abolition of the authority, it contends that the separation of schools from colleges and polytechnics would create more problems at the new boundaries than would be solved.

Reviews of course provision within higher education were still in progress, Mr Newsom's report said, while the authority's team of 120 inspectors had enabled the whole field of post-school education to be properly covered. "It is no coincidence that Birmingham and the ILEA, two large urban authorities, have been able to initiate important developmental work in micro-computing and microelectronics generally", it added.

A counter submission by the Conservative group on the ILEA supports the Baker Report's general conclusion that the authority is "in essence neither democratically nor financially accountable, that it fails to secure a high standard of education commensurate with its very high level of expenditure compared with other l.e.a.s, and that fundamental changes are needed to put these matters right".

Carlisle brought in over college business row

The assistant principal of a London college has asked Mr Mark Carlisle, Secretary of State for Education, to intervene in a row over consultancy work which resulted in an unsuccessful prosecution for theft and is still the subject of union proceedings.

Mr Harold Trace, now the assistant principal of the West London Institute of Higher Education, wants Mr Carlisle to refer the conduct of his previous institution, the South West London College, to the ministerial study group investigating the Inner London Education Authority.

Allegations surrounding a business run partly from the college were the subject of an ILEA inquiry which reported to the authority's education officer in 1978. The principal of the college, Mr Lyndon Jones, was acquitted of theft of ILEA property in a test case.

Mr Trace, a former head of department at South West London, is still contesting charges of defaming Mr Jones through the disputes procedure of the National Association of Teachers in Further and Higher Education. The findings of a Natfhe executive tribunal last October were not accepted by all sides so the case has gone to arbitration by the National Union of Teachers.

In his letter to Mr Carlisle, Mr Trace says he considers opposition to his superior's conduct was his duty but that it has had "the most serious personal and professional consequences for me". Although the ILEA have investigated his allegations, the findings of the inquiry have never been communicated to Mr Trace or, he says, governors of the college or ILEA members.

Mr Trace adds that 10 years' experience as a council member of the Association of Vice Principals has shown him that senior staff are placed in serious difficulties when disagreeing with the actions of a college superior. "One's career may well be in peril", he says.

New Kirklees Council drops poly board chairman

Mrs Jane Carter, a principal opponent of Kirklees Council in its recent dispute with Huddersfield Polytechnic, has not been reappointed as chairman of the board of governors under the newly elected Labour council.

Mrs Carter had resisted the council's attempts to take over control of the Institution after an audit report by the authority had alleged maladministration and lack of accountability.

She said: "The council seem to want to use their power as a funding body to impose a penalty on the polytechnic. They want to force through the changes demanded in the audit, especially including the budget, over and above the cuts imposed nationally."

Budget breaking universities must live off their reserves

Universities which make big losses this year because of falls in overseas student numbers will have to carry their deficits and live off their scant reserves for a year.

But they will know in advance how much, if anything, has been allocated to them out of the £5m earmarked by the University Grants Committee out of the recurrent grant to help them adjust to the new overseas full cost fees policy.

Rather than helping out the universities on numbers on overseas students became known, the UGC will tell them next week what they will get out of the £5m pounds. This will get out of the £5m pounds. This is because the special grant is to be used for protecting research and it is possible to be highly selective because it is known where the large numbers of postgraduates are.

To distribute the special grant as the problems occur would give universities a financial incentive to court deficits.

It is understood that the UGC will not make any major changes in the normal recurrent grant structure to help individual universities experiencing serious losses. The 1980-81 allocations are likely to be based on last year's figures. The UGC sees the following year, when the position on overseas admissions will be known, to be the crunch year when any changes would have to be made.

The problem the UGC has had in working out the grant allocations is not knowing how many overseas students will want to come, despite the new fees. It has been looking at figures showing the potential losses under various possibilities. Most universities have decided to charge the minimum recommended fees.

Government criticized on overseas fee levels

from page one

At the press conference to launch the two reports the chairmen of both committees were scathing about the degree of cooperation they had received from Ministers and civil servants. The Education Committee even produced a separate document setting out its views on the provision of information to select committees.

Mr Price, chairman of the committee, said there was a basic conflict between Parliament and the Government on the disclosure of information, which would have to be settled. Referring to the commitment by Mr Norman St John-Stevas, Leader of the House of Commons, to facilitate the business of the committees, he said: "If the information about inter-departmental consultation provided to these committees is as helpful as possible, I would be amazed to know what unhelpful advice would be like."

Despite a contrary move by the Labour members, the Education Committee accepted the concept of full-cost fees "as a convenient basis for accounting" and that further changes in the method of assessing this figure should be avoided. In future, the distribution of overseas students should be calculated by level of course, subject, country of origin and method of support, with the information published annually along with the new levels of fee and target numbers.

The University Grants Committee was also recommended to hold talks with the DES in order to produce a Note of Guidance on fee levels, with information being provided to local authorities to enable them to do likewise.

In their remaining recommendations the education committee called for clarification of the meaning of level funding, and of the interpretation of ordinary residence, distinction to be made between changes made for developmental or educational reasons and those proposed on purely financial grounds, and greater emphasis to be given to encouraging institutions to pursue an entrepreneurial policy regarding recruitment.

The Foreign Affairs Committee, in a more ambitious set of recommendations, demand:

● A substantial increase in funds for technical cooperation within the aid budget to ensure that this year's number of students is maintained.

● Provision of sufficient funds for the ODA to reverse the decline in the number of students from poorer countries.

● Similar arrangements to safeguard the prospects of those from Commonwealth countries of dependent territories where higher education institutions do not exist.

● A fee waiver for technicians, craftsmen and other trainees.

● The committee also wants urgent action to safeguard the future of specialist institutions such as the London School of Hygiene and Tropical Medicine. It also called for a special study in conjunction with the EEC to establish the position of Third World countries which signed the Lome II Convention, and talks aimed at enabling students from poor Commonwealth countries to study in the mere developed member states.

Mr Kevin McNamara, the chairman, said the courses likely to be hardest hit were those most capable of raising the standard of life in developing countries. His committee's report, which was approved in its entirety by two Conservative members said there was an evidence that the overseas implications of the new fee levels were given even a cursory examination.

● Dons at Oxford University have rejected a proposal from the governing council to charge overseas students £200 a year more than the Government-recommended minimum of £2,000 from the start of the next academic year.

Congregation voted by 617 to 483 against the proposal in a postal vote carried out during the Easter vacation. Almost 50 per cent of the fellows and lecturers voted.

The governing body, the Hebdomadal Council, will now formally delete the instruction. A vote in Congregation had also come out against the proposal but not by a sufficient majority to overturn the recommendation.

Major changes in social work requirements

Major changes in the assessment requirements for social work students were announced this week by the Central Council for Education and Training in Social Work.

They are likely to lead to dramatic reorganization of some courses offered in universities, polytechnics and colleges, and may spark off a new controversy about curriculum uniformity which has split social work teachers and practitioners in the past.

The council's statement says that the new requirements represent a shift in emphasis from the recognition and review of course content to the knowledge and competence that social work students should demonstrate before being awarded the certificate of qualification in social work.

"Throughout the past eight years, the council has pursued a policy which has recognized that universities, polytechnics and colleges need a considerable degree of flexibility in making best use of their teaching resources and the capabilities of their students if their programmes are to provide effective education and training," the statement says.

"At the same time however, the council has a statutory responsibility to ensure that social workers successfully completing the courses it recognizes, share a core of knowledge and competence."

Under CCETSW's new requirements students will be expected to demonstrate knowledge and understanding in five specific areas of study and also show their ability to carry out a list of required tasks.

The council also intends to tighten its requirements in practice teaching. The minimum length of each placement will be not less than 50 working days, and must be under the supervision of a qualified social work practice teacher with at least two years' experience.

In addition the council is seeking to involve external examiners more, who must report on internships to review, reorganize or implement new courses.

The new requirements will take effect on the intake to CQSW courses in 1982/83 and the council is asking for comments on them by October 1 this year.

This amendment of guidelines follows an extended period of consultation which began in 1976. It erupted in a blaze of controversy in 1978 following the publication of a discussion paper *Consultative Document Three* by CCETSW.

Strannillis breaks with 'pro-IRA' union

Stranmillis College of Education in Belfast has become the first Northern Ireland student union to disaffiliate from the National Union of Students because it believes the union has passed policy indirectly supporting the IRA.

The NUS passed a motion to campaign against the "inhuman" treatment of women prisoners in Armagh jail. The NUS president, Mr Trevor Phillips, described the motion, passed by 296 votes to 214, as "humanitarian".

Mr Trevor Gill, president of Stranmillis student union, said the decision was taken because the Armagh campaign is closely linked to the IRA campaign and the union was opposed to all forms of terrorism.

In a statement from the union, which has 850 members, he said: "The students of this college are completely opposed to any terrorist activity which seeks to undermine the democratic structure of this country.

"We realize that within the NUS many people are similarly opposed to violence in Northern Ireland. However, we feel the best way to register our disapproval is to disaffiliate." The policy was misguided and misinformed, he said.

Other student unions, including Queen's University, Belfast, and Rupert Stanley College, Belfast, are also expected to discuss the new policy, and vote on disaffiliation motions.

Mr Andy Pearman, the NUS executive member responsible for Northern Ireland, said: "Our policy for peace, jobs, and progress was designed to avoid this sort of thing happening. Years and years of hard work, have now been put into jeopardy. This policy could create great sectarian divisions in many student unions there."

This was denied by Mr Stuart Hepburn, a left-winger on the executive and a sponsor of the new policy. "This motion deals only with human rights. It is to Britain's shame that these women are rotting in prison. There is nothing about the IRA in this."

Ngaio Crequer and David Jobbins report at the AUT Council in Liverpool

University teachers press for single salary scale

University teachers agreed last week to press for a single salary scale to replace the present lecturer and senior lecturer grades despite a strong plea from their executive that this would depress maximum salaries.

The council of the Association of University Teachers, held at Liverpool University, voted by 125 to 95 to a thorough overhaul of policy, after a lengthy and emotional debate.

The motion called for two efficiency bars. the present one and a second, the present maximum of the present maximum of the lecturer scale, to be firmly within the span covered by the maxima of civil service principals.

Progress through the bars should be based entirely on merit, the university and the AUT should define what was required to proceed and any lecturer held at a bar should be given specific reasons in writing and told how performance needed to be improved.

Dr David Thomas, who seconded the motion said the lecturers were "feudal vassals in the pay of feudal landlords". He said that often progress was not made on merit. At Bristol the university worked out how many people could go through and acted accordingly.

"We do not want a skiver's charter. It is an act of grace and favour if you are told why promotion has been refused. If we believe in pursuing excellence then let us not agree to follow a procedure fundamentally undemocratic and feudal".

● The University Grants Committee has undertaken to respond by September or the latest to the AUT's demand for an increase in the proportion of senior staff.

AUT has said speedy action is needed because 31 per cent of all dons are at the top of the lecturer scale—and the jam is increasing by 1.5 or 2 per cent o year.

● There were harsh words about the resistance to professorial pay scales by the university authorities. Although the employers say professors do not want an incremental pay scale, an AUT survey indicates as many as 80 per cent do.

General Secretary Laurie Sapper said: "This is the one last remaining power of patronage by certain vice-chancellors. In some places it may be operated very fairly but in others it is at the whim of one individual, perhaps in national consultation with the chairman of council.

Russian report slammed

The credibility of the University Grants Committee was at stake over the way it handled the report on Russian Studies, Dr Andrew Taylor, president of the Association of University Teachers, told the council.

He described the report, which called for the closure, transfer or phasing out of Russian in 19 universities, as shoddy and disgraceful. The report, he said, did not set out any criteria by which departments had been selected for criteria, and the committee had steadfastly refused to reveal its reasons.

"The UGC will not survive if they do not retain the belief of university staff in the standards of competency, and keep their good will by operating openly. What is at stake here is not rationalization, but the credibility of the UGC."

He said he was aware of a vague report that unless something was done on Russian, then the Government would step in, but he said there was no evidence from the Government that this was the case.

"We are aware of only one university, the University of Manchester Institute of Science and Technology which, in its shame, is attempting to exploit this report.

"If we can stand firm this report quietly shelves this report," he said.

Mr Terry Wemless, of Strathclyde, said that any student of ba who produced such shoddy work would be in danger of being disciplined. "Ever since the report was published, as I uncovered more and more I became more indignant about its insulting approach."

She said the report ignored the input of Russian teaching into other areas, and the links between Russian and other subjects

The council unanimously passed a motion instructing the AUT executive to maintain its opposition to the proposals, and calling on the UGC in future to consult fully with the AUT before formulating any proposals which would affect the conditions of service of members.

Demo banner splits the ranks

Contrera was voiced about one aspect of the AUT's public image—inflicting a defeat on the executive in the process.

What caused the furore was neither the general secretary's public statements—nor the cut of union leaders' suits.

It was the AUT banner given on airing on the March 9 demonstrations by the TUC. "Not visible or legible", "Not serving as a good rallying point", delegatee complained. "Why is it yellow?" asked someone from the Glasgow contingent, which sports a black one.

President Dr Andrew Taylor didn't agree. On March 9 it had certainly made an impact on watchers standing on the pavement who were presumably hostile to the manual and public service workers. "It was quite remarkable to see the change come over them when they saw the university teachers", he said.

The banner was not so important for AUT's image as the numbers marching behind it. The existing banner was "quite adequate" and was anyway used only once or twice a year—"although to years to come perhaps a little more often".

As for asking the executive to look into designs for a new one, find out how much it would cost and report back, this was making a bit of a meal of it.

Nevertheless that was what the council voted to do—against the executive's wishes.

Opposition to Flowers medical scheme

The council maintained its opposition to the Flowers report on London medical education and said that the threatened redundancy of academic staff was significant to all university teachers.

Mr John Akker, AUT deputy general secretary, said: "What happens in London is a precedent for what happens elsewhere. Our view is that the case for the Flowers report has not been made on any substantial basis."

He attacked the claim that the report, if implemented, which recommends the reorganization of medical education into six schools, would save up to £3m.

"When we approached the university to substantiate that they said it was a 'guesstimate'. When we asked how much it would cost to reorganize the schools in larger groups, we found no calculations had been done. In respect of just one of the amalgamations we say it would cost up to £14m."

He said the AUT wanted clear assurances regarding the staff. There had been no assurances about redundancy or the possible transfer of staff that might take place, although there did appear to be recent changes of attitude.

Dr Richard Bruckdorfer, of the Royal Free Hospital, said the Flowers report was rushed and incompetent. Other institutions which would be affected by any rationalization had not been consulted.

He also criticized the quality of the consultations that had taken place. At the Royal Free, he said, staff were not asked about what would happen if it closed down, but what the attitude would be to an increase in the number of students. He said this pattern existed in other schools.

The council instructed the executive to publicize the fact that the quality of teaching depends upon research activity, and to organize united opposition by all staff associations against full implementation of the report.

Full-time student numbers drop further

by John O'Leary

Numbers joining full-time courses in higher education dropped for the fifth successive year during 1979, largely because of a dramatic fall in teacher training enrolments. But an increase in part-time numbers brought about a marginal overall rise.

Statistics for last year, issued by the Department of Education and Science, show a fall of one per cent in the number of students on full-time and sandwich courses but an increase of six per cent on part-time day courses. With numbers constant for evening only classes, the result was an increase of one per cent overall, bringing the total number of students up from 342,000 to 347,000.

Full-time courses outside teacher education showed increased enrolments of 7,000, but a 9,000 drop in initial teacher training brought the total full-time figure to only 192,000. The comparee with 194,000 in 1978 and 208,000 in 1974.

The best news came in engineering and technology, where numbers were 5,000 up following a sharp rise in part-time enrolments. Other subjects showed only marginal fluctuations.

As in previous years, enrolments at polytechnics rose more sharply than elsewhere, although their upward trend was less marked then before. Numbers had risen by more than 50,000 in the four years up to 1978 and only a further 3,000 were added last year.

Of those graduating, sandwich course students fared better than their colleagues in all sectors of higher education in the race for jobs. And, overall, more graduates went into industry and commerce than at any time since statistics have been kept on the present basis.

The number of first degree graduates known to be unemployed by the December following their completion of studies fell for the third successive year in 1977-78, the last for which statistics have been produced. Among sandwich students, only 3.6 per cent were known to be without jobs, compared with 4.2 per cent on university courses and 6.5 per cent on degrees validated by the Council for National Academic Awards.

In general, the DES says, there was a decrease in the proportion of students going on to further education and training, although this figure varied according to subject area. In the health subjects, for example, more than 90 per cent entered permanent employment upon completion of study, whereas the equivalent figure for language students was only 31 per cent, over 40 per cent going on to further study.

Statistical Bulletins 2080 and 3080, published by the Department of Education and Science Statistics Branch, Elizabeth House, York Road, London SE1 7PH.

National Council plan is a possibility, says DES official

by Patricia Santinelli

The setting up of a national council to oversee national policy on non-advanced further education is a future possibility, Mr Alan Thompson, deputy secretary of the Department of Education and Science has confirmed.

Speaking at a conference on planning for non-advanced further education organized by the Chartered Institute of Public Finance and Accountancy, Mr Thompson warned however, that this could only be the second step in the process of devising a national policy.

"Before any such body can exist, work must be done on the methodology. At the moment we are looking at a framework through which some policy can be devised and we will consult local education authorities. We realize this is urgent and we mean to do it but it might take longer than expected because of the present reductions in manpower," he said.

He pointed out that the trouble in devising a national policy was that non-advanced further education (NAFE) was not just "one thing" but an agglomerate of different standards and objectives, and rightly described as an "amorphous yeasty beast".

"The difficulty in introducing national planning policy to which no government has yet addressed itself properly, is how this sector can be disaggregated so that the different bite make sense," he said.

Mr Thompson put forward a paper giving an approach to NAFE planning which outlined eight categories of client groups ranging from people seeking further academic qualifications for entry to further education or employment, to the unemployed seeking to better job opportunities or wanting to change employment and those seeking recreation or self-fulfilment.

Cash cut forces adult advice project to close

Merseyside's educational guidance service for adults (MEGSA), which spans the Liverpool and Cheshire areas, is being forced to close after only two years in operation.

Cheshire local education authority has decided to recall MEGSA's project director, Mr Colin Martin, who has been on secondment from North Cheshire college of higher education.

MEGSA, which was set up in 1978 as a result of a move by the Merseyside and district Institute of Adult Education, is one of only 21 educational guidance services for adults throughout Britain.

The service has a twin base in Liverpool and Warrington so a comparison could be made between the differing needs of a long established metropolitan area and a borough with a large new town development.

Last year the service dealt with more than 600 clients aged between 21 and 74 the majority of whom were seeking entry to higher education. Most of them were unemployed men aged between 25 and 35 or women over 35 who had already spent some years bringing up a family.

The imminent closure of MEGSA highlights the precarious financial state of most educational guidance services for adults. Last year both Cardiff's educational resources information centre (ERIC) and Leicester's leisure and educational opportunities service (LEO) were forced to close through lack of funds.

Because of financial constraints a Sheffield working group was forced to postpone plans for an independent service. Instead they have set up a monthly service staffed by volunteers.

However, there are signs of growing strengths in the movement for a national network of educational, information, advisory and counselling services for adults with central government funding.

This has been spurred by the recently-published Jackson Report, which recommends that the Department of Education for Northern Ireland set up a central agency to coordinate adult education guidance.

Strathclyde University's next principal and vice-chancellor will be Professor Graham John Hills (above), senior deputy vice-chancellor of Southampton University. He is expected to take up his appointment in November 1980, succeeding Sir Samuel Curran.

Professor Hills (54) has been deputy vice-chancellor of Southampton since 1976, having joined the university as successor of physical chemistry in 1962.

During his 18 years at Southampton, Professor Hills has held several senior administrative posts.

Lecturers' union blacklists Surrey colleges of art

The college lecturers' union has imposed an official blacklist on appointments to Surrey's three art colleges following a total breakdown of talks over threatened redundancies at West Surrey College of Art and Design.

The executive of the National Association of Teachers in Further and Higher Education has also threatened to extend the blacklist to the county's four technical colleges if the union fails to get any satisfaction from a meeting between the education authority and Natfhe leaders.

Surrey is pressing on with plans to shed 14 full-time equivalent posts at the Farnham college from May 1981, and seven more in 1982. About two-thirds of potential redundancies will affect full-time staff with the rest being made up of part-time lecturers.

Letters have been sent to 11 named individuals warning they may be made redundant, with formal notification likely by the end of the month.

Lecturers at the college have voted to work precisely to the national conditions of service in protest. A one hour token stoppage has already been held.

Union leaders believe that the West Surrey case is the first time staff student ratios have been used to justify redundancies. "This is a warning for every other college in the county," said Natfhe's Surrey county secretary Mr Les Brook.

Officials expect formal redundancy notification will follow within a week but hope it may be delayed pending a delegation from union head office.

At Trafford, formal redundancy notices are expected by the end of next week. The authority has said it wants to shed 35 lecturers' jobs. Union officials believe that 15 positions now vacant will be disestablished and that between eight and 10 staff may opt for premature retirement or compensation.

Education officials are confident that they can resolve the issue without having to make lecturers compulsorily redundant.

Books spending down by a third in three years, committee told

by Charlotte Barry

Spending on books in universities has gone down by a third in the past three years, the public accounts committee was told in the House of Commons.

The secretary of the University Grants Committee, Mr Geoffrey Cockcrill, told the all-party committee of backbench MPs that although successive governments had done their best to safeguard equipment grants, cuts in the universities have resulted in fall on books, laboratory materials and general maintenance.

In reply to a question put by the committee's chairman, Sir Joel Barnett, Mr Cockcrill denied that the reduced spending on books implied that too much had been spent previously. He added that the one third cut in book buying had not apparently had any damaging effects.

The permanent secretary at the Department of Education and Science, Sir James Hamilton, told the committee that the universities had suffered a drop in income of 5 per cent since 1977-78 due to changes in Government policy.

"It is not easy for universities to deal with this, and this is one reason that we have allowed them to accumulate a certain amount of reserves to cushion them against reductions like these", he said.

He told committee members that by 1977 the universities had built up reserves of about £80m, from £30m in 1974. By 1978/79 they had fallen to £65m and the future level will be decided following detailed discussion with the Treasury.

Sir James said that the DES considered reserves totalling 4 per cent of the income of the universities would be of the right order.

At present the average is 8 per cent. "But we have not gone any further in trying to persuade universities to reduce reserves. We would prefer to wait and see what happens to the general level of reserves", he said.

Posner criticized for 'abstruse' SSRC research

Sharp criticism of the "abstruse" nature of some of the research funded by the Social Science Research Council was levelled at its chairman Mr Michael Posner when he appeared before the public accounts committee.

Pinpointing a £9,469 grant awarded to a British anthropologist to study the changes in the kinship system and the allocation of sex roles in a modern Polish village, the committee chairman, Sir Joel Barnett, asked how this sort of "abstruse" research was relevant to the national needs of the United Kingdom.

The MP for Horsham, Mr Peter Hordern, also said he found it difficult to understand how research into subjects such as the social organization of long-distance traders in Libya (Kent University), or a study of the history of Boston Massachusetts between 1865 and 1915 (Hull University) could have practical application in the national interest.

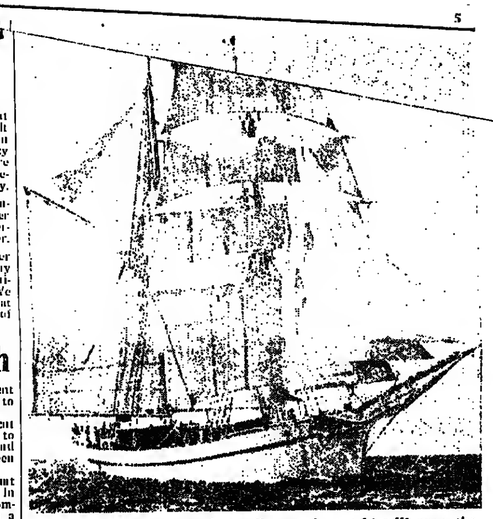
Mr Hordern also objected to the language used in the description of Glasgow University research into the drinking patterns of young people which he claimed was a perfect example of a "spoof" subject invented by an undergraduate.

Replying to these criticisms, SSRC chairman Mr Michael Posner said that he considered the council served the national need adequately as half the research it supported was carried out for Government departments, and they hoped to attract more.

He added that only 2 per cent of the total research funds go to projects in social anthropology, and this sort of work should be seen within the general picture.

"We give a small modest amount to social anthropological work in foreign countries", he told the committee. "The Polish example is a small eccentric example of that sort of thing.

"It would be wrong for us to spend a large amount of our funds on this sort of thing but we do believe that some work in this field deserves a thin modicum of support."



Nearly 200 young people from all over the world will crew the brigantine "Eye of the Wind" (above) in a two-year circumnavigation of the globe to commemorate Drake's voyage 400 years ago. Dr Ian Swingland, a lecturer in animal ecology at the University of Kent, will direct the project's scientific programme when the ship arrives in the Seychelles in June. He hopes to rediscover two extinct species of balsam.

Incentives could correct subject balance, says APT

by John O'Leary

A new system of incentives should be introduced to influence the subject balance of higher education in line with manpower planning, the Association of Polytechnic Teachers have told the Select Committee on Education.

In a written submission to the committee, the APT calls for more vocational courses, and criticizes the Council for National Academic Awards for being too conservative. "Contrary to myth" their evidence says, "the attempt to steer a new idea through the CNAA is extremely hazardous, expensive and, usually, unsuccessful."

The association lists four prerequisites to accompany the introduction of incentives to implement a "broad steer" of subjects. They are: better careers advice to avoid wastage of graduate skills, an adequate supply of the right teachers, freedom of choice for students and the shortening of institutional response time.

"To do nothing could have disastrous consequences, the APT warns, drawing parallels with the effects on Spain when, in the nineteenth century, mathematics and scientific inquiry were dismissed from the universities.

"The general need for the nation is for a skill bank at graduate (and sub-graduate) level," the submission says. "This is even more important at a time of falling rolls when, with the prediction of students for easier hobby subjects in preference to the harder vocational subjects, there could be an irreversible decline in the ability of the nation to sustain its industry, commerce and administration."

Although the pitfalls of manpower planning are accepted, this course is still favoured because the alternative is said to be much more unacceptable. "It would be more acceptable and effective if implemented through incentives, rather than directives, but their exact form would require discussion.

One step in this direction could be through a change in the recruitment policies of national and local government, whose ability to take graduates of varying disciplines is said to have a "generally deleterious effect" on encouraging students to follow difficult disciplines. It would be no worse to have engineers or doctors employed in unrelated tasks than to engage historians in administration, the APT believes.

Production engineers attack Finniston plan for one body

by Robin McKie
Science Correspondent

A strong denunciation of the Finniston proposals for reorganizing engineering in Britain has been issued by the Institution of Production Engineers.

Although the institution, in its response document on Finniston which it has submitted to the Department of Industry, agrees there should be a central engineering authority, it opposes the particular plan put forward in the report of the committee of inquiry.

Instead, the institution proposes that three different bodies be set up. These would be:

● Set standards in education, training and practice;

● Act as a registration board developed from the present engineering registration board which is run by the Council of Engineering Institutions;

● Review and advise Government on engineering matters.

However, none of these bodies would deal with the problem of manufacturing industry's current performance. "As the only chartered engineering body concerned completely with the manufacturing function, the Institution of Production Engineers should be charged and funded by Government on a contractual basis to set up a body which would include professional and functional experts, key members and industrialists.

In its submission on Finniston, the Association of Colleges for Further and Higher Education describes the report as "timely and perceptive" and "a valuable contribution" to understanding the needs of industry.

However, the association argues that some recommendations should be altered. In particular, registered engineering status should be given only to graduates on four-year courses; MEng courses should not be taken until first degrees had been taken and an urgent examination be carried out to investigate the role and future of engineering technicians.

Oxford dons await details of Prague 'infringements'

If Dr Julius Tomin, the Czech philosopher, who recently staged a hunger strike, has been breaking the law by running a series of unofficial seminars in Prague, the authorities should have charged him long ago. That is the view of some academics at Oxford University who are still waiting to find out which laws they broke by attending Dr Tomin's seminars.

Some reports suggest that the Czech authorities may try and invoke Section 202 of the criminal code and charge Dr Tomin and some of his students with "hooliganism" if the seminars continue.

Meanwhile attempts by the Foreign Office to find out why Dr Anthony Kenny, the Master of Balliol College, Oxford, and his wife, were expelled from Prague last month in the middle of delivering a lecture on Aristotle's Ethics, have been relatively unsuccessful.

The Czech authorities have also expelled Dr William Newton-Smith, senior tutor at Balliol and Fairfax fellow in philosophy, for lecturing on rationality and science, and Mr Angus Cargill, a school-leaver from Eton, for attending an unofficial seminar.

They first told the Foreign Office that sections eight and 13 of the agreement on cultural, educational and scientific exchanges were broken. These call for all specific projects "to be agreed beforehand", and for all exchanges to accord with the laws and regulations of the respective countries.

But Foreign Office officials remain puzzled by the explanation. The visits were quite clearly private and not subject to the agreement.

The Czech constitution is also quite explicit that all citizens are granted freedom of expression in all spheres of life, in particular the freedom of speech and of the press (Chapter II, article 28, section (1) of the 1960 constitution). Czechoslovakia is also a signatory of the Helsinki Agreement on Human Rights.

However, the section says these freedoms are guaranteed "for the "economic and cultural construction of the country". Foreign Office officials feel the Czechs could argue this condition was not being fulfilled because the seminars are unofficial.

It would be difficult for the authorities to argue that Dr Tomin's meetings threaten the public order of the country: unless a lecture on Aristotle's Ethics is to be termed subversive.

If Dr Tomin's unofficial seminars are claimed as "educational activity" the authorities could claim he has been breaking Law 186 which says: "All education is controlled and directed by national committees".

So far six Oxford philosophers have visited Prague to lecture at the unofficial seminars. The subfaculty of philosophy at the university plans to continue the visits, and Dr Kathleen Wilkes, lecturer in philosophy and fellow at St Hilda's College, who has organized the visits, says there is no shortage of people wanting to go.

Labour's foreign student targets were lower, says Boyson

A fall of between 17 and 20 per cent in the number of foreign students accepted in Britain next year would not reduce the figures to those planned by the previous Labour Government, Dr Rhodes Boyson, under secretary for higher education, said in the House of Commons.

He said: "There is a decrease in the number of applications of 12 per cent up to the end of March this year compared with last year, and six per cent compared with two years ago.

"However, it should be remembered that only one in four of those who applied last year was accepted at that time and many must have had the necessary qualifications for acceptance.

"A fall of between 17 and 20 per cent in the number of foreign students accepted would not reduce the figures to the numbers planned by the previous Labour Government."

Unit threat lifted

The threat to the Further Education Unit's staffing has now been lifted. The Department of Education and Science agreed last week that two development officers would be appointed as from September 1.

Earlier an urgent special meeting of the unit's board of management was convened to oppose proposals by the DES not to allow the appointment of a second officer until April 1, or possibly not at all in order to effect savings.

Teaching staff canvassed on PGCE

A major study of teacher educators' attitudes to the Postgraduate Certificate of Education, covering 30 universities in England and Wales, was launched by Leicester University's school of education last week.

The study, probably the first full one of initial teacher education in universities, is in the form of a confidential and anonymous questionnaire containing over 60 questions which it is hoped a fair proportion of teaching staff will be willing to answer.

It is part of a much larger three year research project on the PGCE being undertaken with a grant of nearly 70,000 from the Department of Education and Science. The project which emerged as a result of discussions with the Universities Council for the Education of Teachers began last year. So far it has concentrated on making a study of students who entered the PGCE course in October and the first results are about to emerge.

Speaking about the staff questionnaire, Professor Gerald Bernbaum, professor of education at Leicester University said it was intended to gather data on a variety of significant fields. "Provided a satisfactory response is obtained, it should greatly enhance our knowledge of the practices of departments of education in relation to the PGCE and also of staff teaching education in universities."

Mr Ken Reid and Ms Helen Patrick the researchers on the project say that the content of the questionnaire has been determined by three main criteria. "These are what the diversity certain themes such as staff/student ratios and imbalance between teaching load and research in comparison to other departments received and the questionnaire has been designed to obtain some perspective on these issues" Professor Bernbaum said.

"The responses to preliminary interviews implied a diversity of practice within PGCE courses but within this diversity certain themes such as staff/student ratios and imbalance between teaching load and research in comparison to other departments received and the questionnaire has been designed to obtain some perspective on these issues" Professor Bernbaum said.

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North American News

US celebrates week salute to learning

from Clivo Cookson

WASHINGTON

President Carter proclaimed "salute to learning" week in the United States last week to celebrate the official opening of the new cabinet-level education department.

The festivities started with the unveiling of a new United States postage stamp based on an abstract painting entitled "homage to the square: glow" by the late Joseph Albers. Mr Albers did not intend his work to have anything to do with education, but Shirley Hufstedler, the first secretary of education, said it was an appropriate symbol of her department as "a vibrant constructive force for good in this country. In intent it should have a ripple effect—as depicted schematically by Albers—starting from a deep solid base and reaching out to more and more people each year, spreading a glow throughout American education". The stamp, which will actually be issued in September, bears the legend "learning never ends".

From then on Mrs Hufstedler was caught up in a steady stream of celebrations and public relations activities—speeches, parties, visits to schools and colleges, and more unveilings in bust of Horace Mann, the "father of American public education", at the National Portrait Gallery, and the new departmental flag, showing an acorn and a sunlit oak tree, at the White House).

President Carter officially inaugurated the department at a ceremony on the south lawn of the White House with his wife Rosalynn and 12-year-old daughter Amy, called by the Education Department "the first student of the country".

"If we are to prevail against our challenges, we need a tough new commitment to education in America", said Mr Carter. "The new Department of Education can be the catalyst for this new commitment." He had promised to give education its own seat in his cabinet and its own federal department during his 1976 election campaign.

Last October Congress finally approved legislation setting up the Education Department—without giving the federal government a larger role in education, which is primarily a state responsibility.

Mrs Hufstedler, a federal appeals court judge from California, was sworn in as education secretary at the beginning of December, and for the past five months she has been welding together the $14 billion a year worth of spending programmes and 17,000 employees that make up the department.

Washington education lobbyists do not give Mrs Hufstedler high marks for her organizational efforts. They say that the 200 outside experts and consultants she brought in for the task created unnecessary confusion, extra work and bad feelings with the educational establishment.

But they generally approved of the men and women she selected to fill the department's permanent senior positions.

Although most of the activities in "salute to learning week" were all show and symbolism, there was one serious event, a symposium at the Brookings Institution on the federal role of education. The participants showed considerable disagreement about how deeply the education department should become involved in the affairs of schools and colleges.

Undersecretary Minter advocated using the new power and visibility of education in the government to advance "excellence, racial equality and social justice in education". Harold Howe, vice-president of the Ford Foundation and United States commissioner of education under President Johnson, agreed that the department should use its financial clout to attack discrimination on the grounds of sex or race.

Other speakers from outside the government, such as Jack Peltason, president of the American Council on Education, used the Brookings seminar to warn the department not to interfere with schools and universities, except where necessary to enforce anti-discrimination laws and the proper accounting

Carolyn Warner, state schools superintendent for Arizona, urged more federal funding to help schools and colleges meet the costs of Washington's regulations.

One possible new federal role, suggested at the seminar, was to reduce the present inequalities in education spending from state to state. Both Mr Howe and David Breneman, an education expert at the Brookings, thought this might be a new thrust for the 1980s.

However, if Republican candidate Ronald Reagan wins the November presidential election, all these discussions could be irrelevant. He has promised to dismantle the education department.

Shirley Hufstedler unveils the new US postage stamp to mark the opening of the Education Department.

UN fund for Third World technology

A new United Nations fund to support science and technology for Third World starts life this month. However, governments have promised or donated only $48m to the fund, far short of the original figure of $250m agreed at last August's United Nations Conference on Science and Technology for Development (UNCSTD) in Vienna.

Sources at the United Nations Development Programme, which is administering the United Nations Interim Fund for Science and Technology for Development, as it is officially known, say they now expect further $15m to $20m to come in. That would give a total of at least $60m to help developing countries build up their scientific and technological capabilities.

The fund was set up at the UNCSTD meeting as a compromise between the developed nations and the Third World countries. The latter had demanded a far more ambitious programme that would have provided $4,000m for scientific and technological development through a system of automatic contributions by United Nations members over the next 10 years.

But in the face of intransigence by the industrialized nations, it settled for the $250m interim fund to operate through voluntary contributions during 1980 and 1981 only. During these two years an intergovernmental group of experts will try to agree on long-term arrangements to promote science and technology in the Third World.

Britain had already stated in Vienna that, because of its own problems and government spending cuts, it could not contribute to the Interim Fund. So no one was surprised when United Nations was surprised when Britain stayed away from the fund's recent pledging conference in New York. The Soviet Union and other Communist countries of Eastern Europe were also absent.

However, the donations of the other industrialized nations fell far below the hopes raised at Vienna. The United States, whose delegation was talking informally in August of a $50m contribution, will actually come up with no more than $16m. The shortage is attributable not only to President Carter's cuts in the federal budget but also to the fact that the whole American foreign aid programme is facing severe political difficulties in Congress.

Canada declined to contribute, saying that all its available funds are going to its own international development research centre. However, the IDRC may cooperate with the new United Nations fund on joint projects. France, West Germany and Japan have not yet made specific pledges but there is a good chance that they at least will come up with something.

On the brighter side, Italy has produced the biggest donation so far: $9.6m. Both Holland and Sweden pledged $5m, and Switzerland and Denmark will give $2m each.

The United States had hoped that the rich oil-exporting countries would contribute generously, but so far none has done so. The largest donation from an Opec member has been $250,000 from Nigeria. Many poor Third World countries, which should be the prime beneficiaries of the fund, have promised token amounts of a few thousand dollars.

Officials at the UN Development Programme seem to be genuine in their disappointment that the science fund will fall so far below the $250m goal. They attribute the failure to appalling bad luck and bad timing. Instead, they are hoping for the good they can do with the money.

Three hundred applications for support have been received and are now being screened and evaluated by the UNDP. The first batch of five or six projects is due to be announced by the end of this month.

Their range, both geographical and in content, will be wide. One end of the fundis will go to educational and training, including the upgrading of science and engineering departments in Third World universities. The remaining educational projects will involve the exchange of expertise between countries, said a UNDP spokesman.

Overseas News

President's wage cut in cheating scandal

from Martin Rath

TOKYO

A major cheating scandal at one of Japan's leading private universities, Waseda, has been partially resolved with a decision to cut the university president's salary in half for three months.

Earlier this year, in connexion with the affair, police had arrested three university officials, two faculty deans had resigned, a professor had been dismissed, and a university administration official had committed suicide. These actions followed revelations that parents of prospective students had paid a total of 100m yen (about £190,000) to see advance copies of university entrance examination papers.

Waseda, founded in Tokyo in 1882, is regarded as one of Japan's two most prestigious private universities. Graduates are virtually guaranteed lucrative careers in government or with major companies.

In February, 23,000 candidates competed for 2,000 places in the commerce faculty. Results were posted in March, and simultaneously the university president, Tsukasa Shimizu, announced that officials had discovered that a number of candidates had seen advance copies of same papers.

Following police investigations, three university officials admitted stealing the papers from the Waseda print shop, and selling them to a retired school teacher, who resold the papers, complete with model answers, to parents of his former pupils. He charged up to ten million yen (£19,000) for each set of papers. All four men were arrested and are currently on bail awaiting trial.

A few days later Professor Yasunobu Ichihara, a physical education instructor in the education faculty and the coach of Japan's boxing team at the Rome and Tokyo Olympics, admitted that he had passed ten million yen to one of the arrested officials in return for copies of the papers. He insisted that after second thought he had burnt the papers, but university officials said they believed he had shown them to two candidates. An emergency meeting of the faculty voted to dismiss him.

Following Japanese custom, the deans of the education and commerce faculties resigned to accept responsibility for the scandal.

At the end of March a 55 years old administration officer who had also been questioned by police in connexion with the affair committed suicide by throwing himself in front of a train. He left a note declaring his innocence and ending "Waseda Banzai" (Long Live Waseda).

At about the same time a preparatory school director under arrest on unrelated fraud charges declared that a back door admission route to the Waseda commerce faculty had existed since 1973. He said sums of up to 15 million yen (£28,000) were channelled through the secretary of a Liberal Democratic Party politician to ensure a candidate's admission. But subsequent police enquiries could prove nothing and no arrests were made.

In April the affair was declared over from the university's point of view when the board of trustees, the supreme governing body, refused to accept President Shimizu's resignation, but cut his salary instead. At the same time three administration directors resigned to accept responsibility for the affair. The university also announced that inquiries showed that a total of 14 students were suspected to have passed the entrance examinations through cheating, but that all had agreed not to enrol.

Public reaction has been harsh. Criticism of Waseda has been especially strong. And newspapers have called on the government to take step to upgrade the quality of education at the less prestigious universities and many people have suggested that business and government should put more weight on the academic record and personality of potential employees, instead of selecting them according to which university they attended.

Germans fail in bid against reforms

from James Hutchinson

BONN

The West German federal constitutional court has rejected complaints by parents and pupils about a reorganisation of senior form grammar school education. The changes, the court decided, were not unconstitutional.

In recent years the German *Länder*, which have a large degree of autonomy in educational affairs, have been introducing legislations to "reform" the curricula in the two senior forms of the gymnasien—roughly the equivalent of the grammar schools. As a result of this only four subjects are now taken in the abitur, the final grammar school examination and the entry permit to the universities.

This has caused controversy in a number of states. Opponents of the new system argue that the abitur can no longer be regarded as a certificate of a broadly based education. Some university teachers complain that the universities, faced with falling entry standards, are having to fill in gaps in the general education of new students.

The case was brought to the constitutional court by a group of 20 parents and pupils in the state of Hesse. They claimed that the practice of dropping many subjects in the run up to the abitur broke the continuity of the gymnasium course. The abitur had become an empty shell.

Parents told the court that their basic right to decide what kind of education their children should have was being violated. Young people, most of whom were still minors, were left by the schools to make up their own minds. There was no legal provision for parents to have a say.

The court did not agree. Parents, it decided, were adequately consulted. Further, it was the task of the state parliaments to determine what kind of school education should be offered.

Steps taken to heal student rift

by Guy Neave

Serious attempts are underway to unite a faction-riven French student movement. Meeting at the University of Nanterre last week, 629 delegates from the non-Communist left took the first steps in the setting up of a new student body.

Since the events of May, 1968, the student movement has been split between the *Union Nationale des Etudiants de France* (ex *Renouveau*), dominated by sympathizers of the French Communist party, and the various non-Communist groups—Trotskyite, Socialist and groups aligned with the Workers' Participation Movement.

The latter groups (though jealous of their autonomy) supported the other student union—the *Union Nationale des Etudiants de France* (ex *Renouveau*), the initiative to create a new union has come out of this constellation in the spectrum of student politics.

Over the past two years calls for greater unity of action have figured regularly at the various student union congresses. Against this, however, has been the undoubted decline in student support for union activism. In part, this stems from the growing preoccupation of ordinary students with such matters as the spiralling costs of higher education, the falling numbers of grants available.

Short-term issues still exist that start off strong feelings—foreign student entry conditions to French universities is one.

Against this background both Communists in the *Union Nationale des Etudiants de France* (ex *Renouveau*) and their rivals in UNEF (*Unite Syndicale*), have begun a fundamental rethink of tactics and strategy. In future, the key words are to be "student welfare" and, for the non-communist groups to carry the fight against next year's higher education budget.

The Nanterre conference is significant since it saw hitherto bitter rivals within the pro-communist students reach some measure of agreement. One of the first actions of the union that is to replace the *Union Nationale des Etudiants de France* (*Unite Syndicale*) will be the canvassing of students on whether a general strike should be held in protest against the government's higher education policy.

Its second objective will be to aim at a membership of 100,000—not bound by British standards considerable, there are at present some 85,000 students in higher education, but ambitious if one considers the largest student union is not more than 35,000.

This thrust has also brought about a significant change in direction in the Communist UNEF (ex-Renouveau). During its congress last month, bells were made for new students, particularly with particular store to be set by student self-help, the creation of student restaurants—in short, a policy which found remarkably echo 10 days later among its opponents.

Lecturers attack plans to axe teacher training

from Geoff Maslen

MELBOURNE

The Federation of Australian University Staff Associations has strongly criticized projections by the Federal Tertiary Education Commission which predict a marked downturn in the demand for teacher graduates in the 1980s.

According to a working paper prepared by the commission, the demand for graduates from teacher training institutions is expected to fall by more than a third, from 17,500 in 1979 to 11,200 in 1989. But a report prepared for the federation by Dr Mervyn Turner of La Trobe University, questions both the validity of the TEC predictions and the planning strategy derived from them. Dr Turner's report describes the TEC's assessments as "inept" and says it is not possible to rule out the possibility of deliberate deception.

The federation believes the TEC document has already been used to justify cuts in finance for teacher education, to reduce the number of students in training and to prepare the ground for staff redundancies. While university faculties of education are not under direct threat, several Australian teachers' colleges face closure if student numbers continue to fall.

In his report, Dr Turner says there are a number of errors in the calculations and tabulations of the TEC assessment which depress the size of the enrolments in pre-service teacher education below what they should have been on the TEC's stated assumptions.

Australia faces a sharp decline in primary school enrolments in the middle 1980s followed by an increase in student numbers by the end of the decade. To match the decline, most teacher training centres have sharply cut back on student teachers.

Dr Turner says to meet the expected demand for more teachers in the latter part of the 1980s, primary teacher education would need to be expanded by about 50 per cent over a five-year period and secondary teacher education by 115 per cent. If teacher education courses are curtailed to the extent forecast by the TEC, then institutions will not be able to meet the demand.

He says a more fundamental cause for concern is the failure of the TEC to take account of the current high levels of uncertainty in Australian demographic trends, especially birth rates.

"Even if future demand closely approximated the TEC predictions its proposed strategy for supply would prove invalid. "The strategy, far from building up a reserve of teachers which could be used flexibly to adjust between times of over-supply and under-supply, is more likely to deplete reserves of employable teachers and create an aggravated and more permanent under-supply situation", Dr Turner says.

A spokesman for the TEC admitted the commission may have got some same wrong and have been "running a bit tight" on teacher supply. But he denied this affected the validity of the assumptions contained in the working paper.

The spokesman said the working paper was not intended to be used for policy formulation and would be revised following input from the states.

Teacher training institutions are worried that the working party's estimates will in fact be used by the TEC in determining how much money it will allocate to them in the 1982-84 triennium—a decision the TEC is presently considering.

Guatamala campus appeal for UN inquiry

Governors of the principal university in Guatemala have appealed to the United Nations' Commission on Human Rights to investigate events which have led to the death of 24 staff and students and the flight of the university rector in the space of two months.

The National Autonomous University of San Carlos (USAC) has been the subject of a long-standing campaign of violence attributed to right-wing paramilitary groups.

Professor Saul Osorio Paz, the rector, had not left the campus for six months because of threats on his life before going into hiding at the end of last month. Now there are fears that troops will occupy the university and impose direct rule by the military government.

Fewer graduates jobless

from John Walshe

DUBLIN

The buoyant economic situation in the Republic of Ireland over the past few years is reflected in the latest report of the Association of Irish University Careers and Appointments Services.

In 1979 the largest number of graduates ever recorded entered employment directly after graduation. Fewer graduates than ever were unemployed.

However, the report revealed that there were still too many graduates taking the one-year higher diploma in education and closing a small number of new teaching jobs. It also showed that graduates generally were reluctant to enter the rapidly developing manufacturing industry, and there are fears that because of the changing economic climate the jobs situation may not be as good this year.

The latest report traces the career paths of more than 90 per cent of last year's graduates with primary and higher degrees from the State's five university colleges.

It shows that exactly half of these accounted for went directly into employment a quarter went on for teacher training 12.3 per cent went on for further academic studies, 8.7 per cent for vocational and professional training; the remaining 2.8 per cent (representing 125 graduates) were listed as still seeking employment.

Even allowing for the problem of teacher unemployment, the unemployment figures are very low indeed: between 1975 and 1979 the rate has been more than halved. In two degree areas, architecture and medicine, no unemployed graduates could be traced.

The report shows also that there are still more men than women at university, but there are nearly twice as many women as men in the arts faculties. Only 16 women gained engineering degrees out of a total of 419 graduates.

The section of the report dealing with teacher employment shows some very real problems, particularly for those teachers who have arts degrees.

Science and technology deal signed

The United States and Japan have signed a five-year science and technology agreement that goes much further in promoting direct collaboration than any previous agreement the Americans have made with another country.

The White House says it represents a "new mechanism for developed countries to work together on solving global important research and development problems. It allows advanced nations to pool resources rather than duplicate efforts in a variety of areas."

Although the United States has science and technology agreements with many other countries, including China and the Soviet Union. They usually involve only joint seminars and scientific meetings, exchanges of students and scholars, and perhaps a few collaborative experiments.

Research cash rise

Canada's three research granting councils will get the big budget increases for 1981-82 that they had been promised by the Conservative government before its defeat in February's general election. John Roberts, science minister in the new Liberal Government, said the natural sciences and engineering research council will receive a 35 per cent increase to $163m, the Medical Research Council will get 17 per cent more (new total $82m) and the social sciences and humanities research council 16 per cent more ($42m).

Clive Cookson,
North American Editor,
The Times Higher Education Supplement,
National Press Building,
Room 641,
Washington DC 20045
Telephone: (202) 638 6765.

Muted acknowledgement for the tenth anniversary of Kent state deaths

Ten years ago, President Nixon ordered American troops into Cambodia and touched off the most violent cycle of student protests in the country's history. Eight students were killed in late April and early May, 1970.

The anniversary has been marked by a minor wave of newspaper and magazine articles but few acts of remembrance on the nation's campuses. However, at Kent State University, scene of the worst incident of all, about 1,500 people did gather to remember the shooting of four students by the Ohio National Guard on May 4, 1970.

The crowd stood there for a moment of silence at 12.24 pm, the time of the 13-second fusillade 10 years earlier that killed Allison Krause, Sandra Scheuer, Jeffrey Miller and William Schroder, and wounded nine other students. The night before there had been a candlelight vigil—as on every previous anniversary—and a memorial service.

Several veteran anti-war and civil rights campaigners went to the commemoration, including David Dellinger, George Weld, Bella Abzug, and Kwame Ture (formerly Stokely Carmichael). Some of the wounded were there too, including Dean Kahler, now 30, who was shot in the spine and has been confined to a wheelchair ever since.

Before and after the moment of silence, part of the crowd marched across Blanket Hill, the site of the shootings, chanting slogans such as "make jobs, not war" and "hands off Iran". But it was fortunately an extremely placid demonstration compared to the one 10 years ago.

By all accounts Kent State today has a generally quiet student body. The last major protest there came in 1977 when students put up a "tent city" on Blanket Hill in an unsuccessful attempt to block the university's plans to build a gymnasium on part of the site and, it was alleged, deliberately to erase the memory of the shootings. Two hundred students were arrested but the protests faded away and the gym is now complete and in use.

The legal fall-out from the shootings did not finally settle until January, 1979, when, after several criminal and civil trials and retrials, the wounded students and the parents of the dead accepted an out-of-court settlement. They received $675,000 and a statement of apology.

The memorial bell actually tolled 20 times during the month's remembrance ceremony at Kent State, because that was the total number of deaths caused by campus protests in the United States during the 1960s and early 70s. The other four students who died in the violence of April and May, 1970, were: Kevin Moren of the University of California, Santa Barbara, shot accidently by a policeman as he tried to defend a branch of the Bank of America near the campus against an attack by radicals; Georgia Winnis of the University of California San Diego, burned to death after painting petrol over himself in a protest against the Vietnam war; Philip Gibbs of Jackson State College (now University) and James Green, a senior high school pupil, killed by Mississippi Highway Patrolmen at a protest on the Jackson State campus. (Some blacks claim the Jackson State shootings have been ignored by the American public, compared to Kent State, because they occurred at a black college.)

Flashback to June, 1970: a student demonstrator hurls a canister at Riot Squad police in the wake of the Kent State shootings.

NATIONAL COUNCIL FOR DRAMA TRAINING

Extension of Accreditation Procedures to include Stage Management Courses.

The National Council for Drama Training (NCDT), which is currently engaged in drawing up a list of acting courses to which it grants its accreditation, proposes to extend its accreditation procedures during the academic year 1980/81 to cover Stage Management courses. NCDT accreditation, when granted, will have important implications, not only for students, but also for institutions running Stage Management courses, in the following areas:

maintenance of high standards of training

student grants

links with the theatrical profession

entry into the profession

The granting of NCDT accreditation will be a two-stage process. First, institutions must meet certain criteria in order to qualify for an accreditation visit. Then they will be visited by a group of assessors drawn from the NCDT's Accreditation Panel, on which all branches of the profession are represented. When all institutions which meet the qualifying criteria and which apply for accreditation have been visited, the NCDT (on the advice of the Accreditation Panel) will publish a list of those Stage Management courses which qualify for NCDT accreditation. Accreditation visits will commence in October 1980 and it is expected that the NCDT will be in a position to publish its list of accredited courses by the end of the 1980/81 academic year.

It is not necessary for institutions to be members of the Conference of Drama Schools in order for their Stage Management courses to be considered by the NCDT for accreditation, but it is necessary for the institutions concerned to meet the qualifying criteria in respect of their courses, details of which are obtainable from the NCDT at the address given below.

Institutions wishing to apply for NCDT accreditation of their Stage Management courses should make application to the Secretary, National Council for Drama Training, 5, Tavistock Place, London WC1H 9SS by June 30, 1980.

David Jobbins reports on the protracted and embarrassing case of sacked college lecturer John Regan

The sending-off which West Ham can't forget

There are divided opinions on whether the case of sacked West Ham College lecturer John Regan will again be a major issue at the college lecturers' union annual conference.

At last year's conference of the National Association of Teachers in Further and Higher Education, its leaders succeeded in keeping the row which has provoked such strong reactions within the union from boiling over.

Apart from a bitter wrangle in private session over a refusal by the then president, Dr Peter Knight, to accept an emergency motion, activity was limited to earnest lobbying and distribution of screeds of pro-Regan propaganda.

Since then there has been a union inquiry into the case exonerating Regan's principal and national executive member Mr Eric Williams—and a derision by an industrial tribunal that Mr Regan was fairly dismissed.

Also in the intervening year activities and the impact of spending cuts on jobs and the shape of further and higher education in the future have emerged as dominant issues.

The affair has been an embarrassment union leaders were anxious to minimize. Biology lecturer John Regan was Natfhe branch chairman and an enthusiastic supporter of the campaign for a merger of the two lowest lecturer pay scales. This policy had been forced on a reluctant executive by the 1978 conference and by the autumn of that year feelings were running high that not enough was being done about it.

The small but vocal extreme left-wing College Rank and File group within Natfhe was pursuing a Merger Now! campaign and Regan, although not a Rank and File member, supported it.

A department at West Ham, whose students Regan taught although he was attached to another, decided to institute a revised way of reporting on students. Instead of individual reports at the end of term, a composite report on all students would be made every six weeks.

The inquiry decided that the only criticism which could be levelled against Mr. Williams was that he acted precipitately.

Mr Regan regarded this as extra work and declined to comply with the new system but by late November 1978 he was the only member of staff still objecting. On Friday, December 1, Mr Regan, who had received a letter from Mr Williams, asking him to come to a meeting that day, got the backing of his Natfhe branch for his request for remission to get the reports done.

Ten minutes before the meeting with Mr Williams, Mr Regan and two branch officers agreed that it should be regarded as a negotiation and therefore on neutral ground.

At 3 pm, Mr Williams twice instructed Mr Regan to meet him in his room. Regan said the meeting would be on neutral ground or not at all.

"I am serious," Mr Williams, a member of Natfhe's national executive and then chairman of its action committee, said.

"I am serious, too," Mr Regan replied.

Next morning he received a letter from Mr Williams, suspending him from December 1. Mr Williams gave as a reason "gross misconduct" by consistently refusing reasonable instructions to complete the reports and to be interviewed in the principal's office.

The suspension produced a flurry of activity by Mr Regan's supporters both inside College Rank and File and outside it. Efforts to raise the case in the Outer London regional executive were unfruitful, and the region's annual meeting broke up in some disarray before resolutions which it had passed on the case could be formally transmitted to the Bristol conference.

By this time, the governors had backed Mr Williams, and recommended dismissal from the college coupled with a plea to Newham borough council to find Mr Regan a job elsewhere in the authority. Their decision was made despite the lecturer's promise to complete the reports.

In the event Newham's education subcommittee confirmed the dismissal, and Mr Regan lost his tenure at the end of April.

The scene seemed set for the 1979 conference, but another event had further complicated the affair. Mr Williams brought a complaint under Natfhe rules against two union members alleging they had distributed leaflets outside the December, 1978, national council meeting accusing him of victimizing Mr Regan. The complaints, brought under rule 8 which deals with actions detrimental to the interests of the association, have yet to be heard.

When the attempt was made at Bristol to secure a debate, Dr Knight was able to call in aid the recently established committee of inquiry in resisting the move.

The inquiry, chaired by Sir Edward Britton, reported in the autumn. It said the only criticism which could be levelled against Mr Williams was that he acted precipitately. It found that every effort was made to ensure that the union head office and national executive were not influenced by Mr Williams' position on the executive, and that given Mr Regan's actions there was no alternative to suspension. Dismissal was a "somewhat harsh" penalty, it added.

Meanwhile, Mr Regan's claim for unfair dismissal was pursuing a tortuous course through the industrial tribunals. The tribunal sat on 11 days in October, 1979, and January this year, before setting out its reasons for referring the claim in a reserved judgment early in the spring.

In uncompromising terms the judgment set out why it agreed that Mr Williams could no longer allow Mr Regan to remain at the college. He affected to "reasonable discipline," it said. He "flouted authority" and was not amenable to the authority of his seniors.

"His personal ambitions to obtain additional academic qualifications and trade union esteem came to overshadow, indeed swamp, the basic requirements of his duties as a college lecturer," it said.

A crucial finding was that there was no trade union dispute, end serving as the argument about the definition of gross misconduct, the tribunal agreed unanimously that the view he could no longer remain at the college was fair. Mr Regan is said to be considering an appeal.

Mr Regan's supporters see the finding as an attempt to restore the offence of failing to comply with a reasonable request to the category of gross misconduct for which dismissal is the customary penalty.

The handbook of guidance to education authority employers published by the Local Authority Conditions of Service Advisory Board contains a list of offences which have been held to be gross misconduct punishable by dismissal. It includes theft, assault on fellow workers, sexual misconduct, drunkenness and other offences, none of which approximates to Regan's actions prior to his suspension. But it firmly makes the point that the list is not exhaustive.

This list is neither exclusive nor exhaustive and in addition, there may be other offences of a similar gravity which would constitute gross misconduct.

The list is liable to amendment in the light of any negotiations or disciplinary rules which may take place with the recognized unions for your employment group."

Regan's supporters now want the national executive to negotiate with the employers to ensure that insubordination—refusal to comply with reasonable instructions—is not added to the list of offences of gross misconduct for which dismissal is inevitably automatic.

The NEC, however, is less than keen on this course of action and is likely to resist at all costs. Union leaders believe it would be unwise—if not potentially detrimental to members' interests—to define gross misconduct. NATFHE's solicitor advised that cases should be viewed individually, and that it was dangerous to strive for an objective definition which bore the implication that an act amounting to gross misconduct would result in dismissal.

Intentional gross misconduct by a sane person might inevitably result in dismissal, while the same act might not be gross misconduct if committed by someone who could mitigate the offence by, for example, medical evidence of his state of mind, the lawyer cautioned.

The industrial tribunal also forcefully expressed its views on where the dividing lines should lie.

"It is at least doubtful what 'gross' adds to 'misconduct'. It is a matter of place, time, circumstances, voice, patterns of behaviour and other kindred elements.

In particular the campaigners say that disciplinary action was taken against Mr Regan without a full-time official first being called in.

"What may be gross misconduct in a cathedral close may be accepted as normal behaviour in a less secluded environment. . . . We venture the view the categories of conduct reasonably described as 'gross misconduct' are never closed."

This was of particular concern to the Regan Defence Committee. In its counter-report (published before the tribunal judgment) it says: "If John Regan loses his fight at the industrial tribunal a precedent will be set, which will firmly place insubordination back into the gross misconduct category.

"This will mean any refusal to comply with a principal's instructions will constitute gross misconduct and as such the offender can be dismissed."

The committee of inquiry commented: "It is possible that the use of the phrase (gross misconduct influenced the subsequent proceedings, although we found no evidence that it did."

Neither the inquiry nor the tribunal judgment have totally dampened down the prospects of the affair surfacing again at Scarborough. The intensity may have been reduced in sound matters: the July national council will hear executive proposals for disciplinary procedures, together with guidelines for principals who belong to NATFHE when dealing with fellow union members on their staffs.

But bitter discussion is still likely at Scarborough, and if is possible that it may take place even in the public sessions.

At least one motion, from the union's Western region, is likely to be considered relevant, although it is possible that it may be debated without direct references being made to the Regan affair. Western region wants the conference to recall union members to observe the ACAS code on disciplinary procedures—which the John Regan Defence Campaign alleges Mr Williams did not do. In particular the campaigners say that disciplinary action was taken against Mr Regan without a full-time union official first being called in.

But the crucial discussion on the case could take place once more in private session. Rogen's own region, Outer London, has tabled a motion effectively in two parts. It calls on the executive to pay Regan's legal costs—so far estimated at about £600, but more significantly deplores the extension of gross misconduct brought about by the Regan case.

Moves are also afoot to effect a change in union rules to exclude principals and other senior management from NATFHE membership.

The union leadership is already committed to initiating action to secure Mr Regan's reinstatement to an equivalent job with Newham.

Barbara Tuchman: "Narrative is really the spine of history"

Through a glass, but not so darkly

David Walker explains the success of a writer giving America a history lesson

Barbara Tuchman insists that she is an historical writer not an historian. Whatever she is, she is extremely good at it. *A Distant Mirror*, her latest book, may overdo the romance and underdo the rigour for most academic tastes, but it has sold more than 900,000 copies.

Mrs Tuchman came to Britain last month to repeat her Jefferson memorial lecture—an annual lecture given in Washington under the auspices of the National Endowment of the Humanities. In the Guildhall her audience may have been restrained to their enthusiasm, but it is difficult to imagine a popularizer of history being honoured in the same way in Britain. Either Barbara Tuchman is an especially successful historical writer, or historical writers are more highly esteemed on the other side of the Atlantic.

A Distant Mirror quickly sold 600,000 copies in hardback and has just been published in paperback in the United States. It still hovers in the bestsellers' list and its success has surpassed that of Barbara Tuchman's earlier historical romances, *The Proud Tower* and *The Guns of August*.

Her book, subtitled "the calamitous fourteenth century", takes one of the least-known centuries in the history of Christendom and makes it a best seller. She tells a dramatic story of war, crusade, plague, social uprising. She popularizes the story of a woeful century, not by boiling it down to a romance of knights in castles—though the degeneration of chivalry is a strand in the story—but by assimilating further readers the impact of the plague and a hundred years' war on the fabric of medieval society. Mrs Tuchman does not shield her readers from the still barely credible ferocity of fourteenth-century anti-semitism, nor hide the putrefaction beneath the gorgeous vestments of medieval catholic Christianity.

The book succeeded, and the reason, she believes, has to do with the way history refracts light back into our own times. "Half-deliberately, Mrs Tuchman set out to explore this tortured century with an eye to its contemporary significances. . . . "It was after all", she admits, "a century worse than ours. Many things in the fourteenth century struck me as remarkably similar, but they are not deliberately drawn attention to in the text."

A Distant Mirror serves up the fourteenth century as perceived by an East Coast Jewish liberal intellectual, psychoanalytically educated and hence with a tendency to locate several of the practices of medieval man in his psychosexual maladjustment.

For Mrs Tuchman, some fourteenth-century parallels with modern America are inescapable. "Take the deceit practised by Edward III of England in his dealings with France", she cites. "Who parallel with Watergate is unavoidable." The explicableness of the plague of 1348-50 has its comparison with the holocausts of the twentieth century.

Some of Mrs Tuchman's viewers, including some professional historians, have fished for with a literary device she uses in the book—of running the historical narrative in parallel with an account of the life and times of a middle-rank French knight, Enguerrand de Coucy, lord of an estate in Picardy on which a crumbled chateau still stands.

De Coucy is romantic, but *Distant Mirror* is not romance, because narrative is really the spine of history: the sequence of time is more important than models historians allow for. Chronology, in fact, establishes cause and effect because if you take pains to establish what happens in March, then in April, you will discover cause and effect you did not previously know."

Enguerrand de Coucy Mrs Tuchman describes as "a book . . . was an authentic life, exemplifying the knight's position in society by one who also happened to be involved with mercenaries, brigands, to go on an expedition to Tunis, who testified at someone's canonization at Avignon. Coucy, whom I discovered by chance in Froissert's chronicles—we lose everything that happened of no importance during the century."

Medieval history has generally been considered professional historians' stamping ground; in the United States some historical reviewers of Mrs Tuchman's book were heard to growl at her presumption. Mrs Tuchman notes: "Suspicion of me by historians has been problematic—largely because my success rouses doubts (I'm referring to the United States) about the value to history of going through the PhD."

She makes a clear-cut distinction between the historical writer and the historian—and the professional writer's task of the academic historian is to unbury, "reveal new and hitherto unknown facts. . . . Mine is to tell story and convey it to readers in attractive a way as I can."

Lord Denning: 'fixed term cannot be unfixed'

Ngaio Crequer examines some judgments which could be used as precedents in the universities

Does tenure exist when a lecturer is to be sacked?

When vice-chancellors began to ponder the effects of the Government's financial policies, the word redundancy began to creep into their vocabularies.

Some of them rang the offices of the Committee of Vice Chancellors and Principals to ask whether some form of national redundancy plan could be drawn up as a contingency. The committee quickly scotched that one. It would not be possible, even if it were desirable or necessary, simply because of the lack of commonness of contracts of employment.

It is no longer unthinkable to talk of universities closing—even if it is always someone else's university. Senior civil servants will talk privately in some detail, about the problems closure would involve, suggesting they have already done a great deal of research.

The Association of University Teachers has pledged wholehearted opposition to any form of redundancy, as it must. What has come closed down its Russian department and made staff redundant, a lecturer might claim he should United Shoe Machinery Co Ltd. v Clarke, at the Employment Appeals under increasing scrutiny is the concept of tenure. Does it really exist?

Tenure has its origins in the need for pursuers of the truth to be protected, both within and outside university walls. Most university statutes lay down that teachers may not be removed from office unless there is "good cause", variously described as grave misconduct, disgraceful behaviour or physical or mental incapacity.

If a university, under financial pressure, decided to close down or merge a department, and make academic staff redundant, could it do so under the law? The law governing dismissal is consolidated in the 1978 Employment Protection Act. Of five fair reasons for dismissal one is redundancy. One of the requisites is that the employer must show that he has acted in a reasonable manner.

Of great importance in such cases is what is known as the Vokes and Bear principle, which is that the employer must show he has looked around his company or institution to see if a job could be found for the employee elsewhere.

This arises out of a case when a man was dismissed for redundancy after his firm had been taken over by a group of 300 companies. In 1973 the National Industrial Relations Court agreed with a tribunal that the man had been unfairly dismissed because an attempt had been made to see if he could be fitted into some other position in the group before he was made redundant.

The company's claim that they had no centralized machinery for this kind of service, and therefore it was impracticable, was held not to be a valid reason against.

This principle could prove to have an important bearing if applied in the university world. If, say, the University of Gray's has closed down its Russian department and made staff redundant, a lecturer might claim he should have been offered a job teaching Russian in the history department.

The principal has been attacked in other cases, notably in British Tribunal, in 1975, when it was held that Vokes and Bear does not apply when the employer says that nothing else is suitable. Many lawyers consider that a harsh decision and it is of course open to a host of different interpretations.

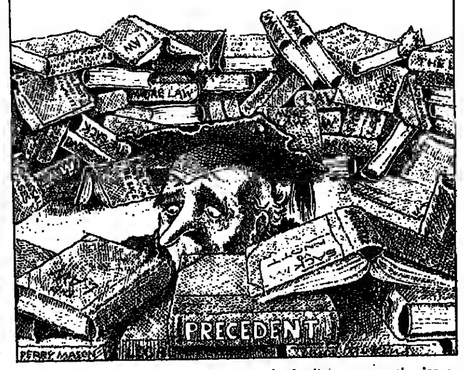
One of the great problems with redundancy is the question of how a person is selected. Presumably a university deciding to close down a Russian department would have to show there were no better contenders in other departments. The struggles that would provoke would be endless.

Another problem with applying the Vokes and Bear principle is that it could mean a university trying to find a niche for someone in a sister institution, or even the local polytechnic. And this would come up against the notions of autonomy.

Much too would depend on whether there were just one or a few people made redundant or sackings en masse.

A tenured lecturer appointed to retiring age has a fixed term contract known by the common law phrase, a term certain. A person with such a contract has a claim for wrongful dismissal at common law for wages in lieu of the unexpired term. Under the EPA an employer can dismiss someone "for some other substantial reason".

Cases so far have involved the reorganization of a company for financial reasons, and one could see that a university, trying to impose rationalization, might bring this into play.



In the leading case on the issue, Hollister v the National Farmers Union, 1978, it was held that reorganization of a business was a substantial reason, the employer only needed to show change was necessary for business reasons and that he had acted in a reasonable manner.

University reorganization because of the cuts would seem to come into this category. But much would depend on the reasonableness of the action. A 55-year-old lecturer dismissed in this way, with little prospect of getting a job elsewhere might contend that the selection of him was unreasonable.

Then again there would be great arguments about what a term certain means. A university might reasonably argue that term certain meaning to retirement age, was too long. It is not certain enough because lecturers are not expected to remain at one institution all of their lives but move on to other jobs. They would argue that universities are not static institutions but are often subject to structural changes. A lecturer of course would maintain that a term certain is what it seems to say.

The courts and tribunals have debated at length what a fixed term contract actually means. An interesting point that might arise is what happens if there are notice provisions written into a contract.

Lord Denning has said in the Court of Appeal that a fixed term cannot be unfixed by notice, that a contract if it is only determinable for misconduct, is a fixed term. The existence of notice provisions would destroy the fixed term. But that view has been contradicted in at least one other case in the same court.

Everything leads to the same conclusion. Tenure has not been tested, the law is unclear and any action by a university would cause all parties to rush for their law books and counsel.

If a tenured lecturer were dismissed he could immediately go to the High Court claiming wrongful dismissal and damages which would be wages in lieu of the unexpired term to retiring age or he would ask for an injunction to stop the sacking without showing just cause. He would also ask for a declaration that he was working on a fixed term contract for a term certain.

If that failed there would be a possible remedy for unfair dismissal in that the sacking was not done in a reasonable manner. This would go to an industrial tribunal, then to an Employment Appeals Tribunal, the High Court, the Court of Appeal and the House of Lords.

Lawyers, if they agree on anything, would all say there in a case of this nature would have to end up in the House of Lords before a final answer could be arrived at. And it could take about two or three years unless the case was expedited because it was a matter of public importance. The thought of a university being dragged before the courts for such a time, and at such great cost, is likely to deter all but the foolhardy vice-chancellor.

So far nothing has been said of the role of the trade unions. The 1975 Employment Protection Act lays down that if a certain number of people are to be made redundant the employer must consult with the appropriate unions. A strong union could provoke for long enough to make a case for avoiding any issue altogether.

A drastic solution might be to close a university down but this, apart from everything else, would mean rescinding a Royal Charter which still is anything but a dead letter.

If there is some small comfort in all of this for the tenured lecturer then the research worker on a short-term contract will probably feel another shudder. Their rights are already about to be diminished by the Employment Bill going through Parliament. It is the unionised who will need the protection first of their trade unions.

Poly's new director aims to mix chalk and cheese

Dr John Beishon tells Paul Flather of his plans for the South Bank

Dr John Beishon rushes through the corridors of the Polytechnic of the South Bank in search of the National Bakery School and a cup of coffee (in that order).

"You cannot say you have established yourself until you confidently know your way round", he says, coming to terms with the first real hurdle for any polytechnic director.

Dr Beishon, who took over at the beginning of April from Dr Vivian Pereira-Mendoza, talks animately about the future of the polytechnics, the need for them to build their self-confidence and concentrate on becoming the "comprehensive schools of higher education".

He has little time for people who argue that crafts and vocational skills courses should be hived off in colleges of further education, an argument once strongly favoured by Mr Terence Miller, the former director of the Polytechnic of North London.

Dr Beishon is proud that the South Bank houses the National Bakery School. "Where else would you see doors marked Confectionery Design or Cake Decoration?", he asks. It does students and staff good to rub shoulders with other people in the canteen, and it does the PhD student and the management trainee good to rub shoulders with someone who is learning about baking techniques.

He says it is important for the polytechnic director to "mine is to ask unknown facts. . . . Mine is to tell story and convey it to readers in attractive a way as I can."

Dr Beishon: keen on reforms

He sees the role of the new universities, like Sussex, where he spent three years as a reader in behavioural science. "The architects were able to create a kind of academic utopia, controlling every detail right down to the gate-posts. The penalty is isolation from the real world", he said.

He wants the South Bank to be like the Massachusetts Institute of Technology: a body with a real sense of identity with the highest standards in academic and research work and stimulating studies.

Dr Beishon, who is 49, trained as both a metallurgist and a psychologist, combining the vocational with the non-vocational. He studied at Harrow County School, Battersea Polytechnic, Birmingham University, London University, completing a DPhil thesis on man-machine system studies at Lincoln College, Oxford, in 1966.

At Oxford he studied at the Institute of Experimental Psychology, working on field studies in the steel and paper making industries. For four years he lectured at Bristol University before moving to Sussex. In 1971 joined the Open University as professor of systems. Two of the projects he studied were the Bay Area Rapid Transit System and the Brighton Marina.

He has a great deal of praise for Lord Perry who built up the OU; he himself established the systems unit so that it now commands a strong international reputation. In some ways he would like to do the same at the South Bank. But he is anxious to strengthen local ties and reform some of the bureaucratic controls.

He supports decisions put by the Committee of Directors of Polytechnics for a new system of funding. He would favour a central agency, like the University Grants Committee, but with political control and responsibility left with the council of governors and the local authorities.

Splitting the two functions, he argues, would improve the structure of the institution. The most important step is to have some certainty of future funding so that directors can safely plan ahead for five or even 10 years.

He has already started moves to make the South Bank governing body more representative by appointing two local MPs, Mr David Mellor and Mr John Tilley, to join the council.

Dr Beishon is also trying to raise money to buy some of the buildings adjoining the two main sites of the polytechnic at Southwark: the Elephant and Castle. He wants to create a nursery for small businesses and cooperatives—projects run in part by the college but also ready to embark on full-time production.

He appears very much as part of the second generation of polytechnic directors: out to build up the institutions but keen on reforms. "If you went up in a helicopter and looked down on higher education you would see all the anomalies", he said. Education in the 1990s will be dramatically different and the polytechnics must be ready to cope.

He talks of life-time learners: he likes to compare the investments in polytechnics with that in North Sea Oil. "They do not produce black gold to off-set the balance of payments, but they will help develop the skills of future citizens.

He remembers his experiences at the Open University where people picked off the streets were shown to have talents that had long been wasted. If everyone did their job just 1 per cent better because of better tuition or guidance, the country would be transformed overnight, he says.

Polytechnics have to move into the future. That means, for example, cutting down the "chaotic" proposed system in the vetting of courses, a subject he feels strongly about. He is in favour of constant vetting with access for the public. Open University courses, he says, could be vetted by every taxpayer by way of television. One committee with five representatives rather than five committees would suit.

He cites the example of Her Majesty's Inspectorate as one institution that was set up in the last century and is now called on to perform a totally inappropriate function on institutions that were created in 1970.

As one would expect from a former professor of systems, Dr Beishon is pushing on with technology. He is appalled to discover that his equipment for training future citizens is out of date compared with the local factory down the road. He is trying to install a modern communications network to bind together the polytechnic's four sites. The blackboard and chalk are really in over. Polytechnics like ours have to lead the revolution", he said.

Simon Midgley visits the City University of New York, the 'proletarian Harvard', bloody but unbowed after a decade of crisis, closure and bankruptcy. He finds a complex organism.

Rich tradition of America's 'Poor University'

The third largest university in the United States is a hardy bloom. To withstand the inclement political and economic climate of one of the roughest cities in the world—New York—it has to be.

The City University of New York is inadequately funded, poorly housed and especially vulnerable to public spending cuts.

Despite these unpropitious conditions CUNY, as it is affectionately known by its alumni, more than survives. It flourishes with extraordinary elan and tenacity.

The only municipal university in the city and the largest in the nation, it has always had a special commitment in educating the children of "the working poor".

Dating back to 1847, when the free academy for men was established by public referendum, this social goal was expressed in the words of the fledgling institution's first president as an "experiment" to see whether "the highest education" could be given to the "masses. . . the children of the whole people".

Dubbed variously over the years as "the proletarian Harvard" and "the university of the poor" it has made the task of educating those from deprived, underprivileged and immigrant backgrounds its own in a city and state well supplied with private universities more interested in meeting the needs of the affluent and generally white middle classes.

Today the university is a sophisticated and intricately articulated web of eight community colleges, nine senior colleges, a graduate school and an affiliated medical school serving a city of 7.2 million people more than half of whom are members of minority groups.

The ethnic demography of New York is reflected in the racial diversity of the university's student body. In 1978 30 per cent of undergraduates were black, 16 per cent hispanic, 4 per cent oriental and just over 1 per cent American Indian. White students accounted for just under half the clientele.

Although in themselves perhaps not very illuminating the sheer grandeur of the statistics involved does at least give a sense of the scale of the enterprise which by British standards is immense.

At present for example 177,000 full- and part-time undergraduate and graduate students are being taught by 5,000 full- and part-time faculty on 1,100 different academic programmes.

This financial year (1979-80) alone the university is to spend more than 505 million dollars on funding an operation which extends to 20 campuses scattered across the five city boroughs.

There is just no precise analogue in Britain. CUNY is rather like a university, a polytechnic and a technical college all rolled into one.

Career-oriented associate degree programmes in dental hygiene, supermarket management or medical secretarial science may be pursued at the community college level, while traditional arts and science courses are ranged alongside vocational and professional areas of study in the senior colleges where students work towards a BA, MA or PhD.

At the highest levels the graduate school and some of the senior colleges house some of the most distinguished faculty and respected doctorate programmes in the country while at the other end of the scale as many as 70 per cent of students entering community colleges need to take at least one remedial course in reading, compositional or computational skills.

The university presents a corporate institutional face when jockeying for funds in the political arena, or when projecting a PR image to the rest of the nation. However, at the grass roots level there is literally a world of difference between Kingsborough Community College in Brooklyn, catering for white middle-class students in a magnificent 55 acre campus overlooking the ocean, and the Eugenio Maria de Hostos Community College, 75 per cent of whose students are hispanic in origin, which is housed in a converted factory building in the economically depressed South Bronx.

Like many American colleges CUNY is an open—access institution. Here this means that any high school graduate is guaranteed a place in a community college but entry to a senior college can only be secured if the student attains a grade point average of 80 or over.

Even then the student may not secure a place in the senior college of his choice if he fails to obtain a grade point average that is competitive with that of his better fellow applicants.

The "university system" is articulated in the sense that all the community colleges offer courses of study in the liberal arts and the sciences which parallel the first two years of study at a senior college.

Students who complete their associate degree and who pass a basic skills test are then entitled to transfer to the junior year of a senior college with full credit given for their earlier work.

Open admissions and credit transfer taken together represent a superbly optimistic view of human potential. Higher educational opportunities are made available to as many students as possible and a great deal of money and effort is spent on trying to support the less well prepared through remedial and counselling services. Last year, for example, the university spent 30 million dollars on remedial instruction.

Positively discriminatory moves are also made to help the economically and educationally disadvantaged by offering them extra counselling, remedial instruction, tutorial services and supplementary finance in specially designed additional programmes.

Through the SEEK programme (Search for Education, Enlightenment and Knowledge) disadvantaged students who scored less than an 80 grade point average are offered the opportunity of studying at a senior college.

Eleven per cent of the senior college undergraduate population of 91,964 are currently studying in this programme.

At the community college level the College Discovery programme makes extra counselling and financial aid available to less well prepared high school graduates. This programme currently accounts for 7 per cent of the 68,706 community college students.

Having secured a place in a community college or senior college a student then has to maintain a rising grade point average to remain in the system.

In future students will also have to surmount a further hurdle before being eligible for entry to the third year of the senior college or transferring from the community college to the senior college—they will be required to pass a Freshman Skills Assessment Test in reading, computational and compositional skills.

Although it is possible to complete an associate degree or a community college in two years and a baccalaureate degree in a senior college in four years often students take far longer to pick up the required number of credits.

This is partly because many people enter college relatively badly prepared by their high schools and partly because so many as half of all community college students and a quarter of all senior college students come as mature students—many of whom will be holding down a full time job and studying part time. (In 1978 more than 61,000 students were enrolled on part-time credit granting courses.)

Given the relatively low admission standards of community colleges, the disadvantaged nature of a significant proportion of the clientele, the difficulties of combining part-time study with employment and the escalating academic standards once inside the system, it is not surprising that every year around 17,000 students drop out having either failed to make the grade or having chosen to leave for other reasons.

The archway of the North Campus at CUNY.

The university then is grounded in a finely judged compromise. On the one hand, to justify the name it must be seen to be maintaining academic standards, attracting distinguished faculty, and producing high quality graduate students, while on the other it is acutely aware of its responsibility to remedy disadvantage and prepare students for the world of work in less academic and more vocationally orientated courses. (Nonetheless the opportunities are there for the once severely disadvantaged to rise through the system and achieve the highest distinction.)

This ambivalence is neatly reflected in the two tier structure of colleges. On the whole the community colleges offer basically similar opportunities for studying the liberal arts and sciences and a diverse range of non-transfer terminal courses in more practical career orientated areas, for example, in numerous technical, artistic, commercial and medical fields.

Traditionally the community colleges have served the needs of their local communities, drawing many of their students from their immediate neighbourhoods and boroughs and making special efforts to relate their educational provision to local needs.

Since 1976 when the university tightened admission criteria and introduced retention standards there has been a more marked contrast between the constituency of students attending senior and junior colleges.

The latter tend to attract a higher proportion of less well-prepared students who because of the relationship between income, race and achievement are often from economically disadvantaged classes and minority ethnic groups. Many of the senior colleges on the other hand still continue to attract a relatively high proportion of white middle class students.

At the upper level most of the senior colleges offer a traditional range of arts and science degrees combined with advanced vocational and professional courses.

More than half of them draw most of their students from local boroughs while some are centres of excellence for particular kinds of training. For example, the John Jay College of Criminal Justice specializes in the training of policemen and the Bernard M. Baruch College in mid-town Manhattan concentrates on the study of business and public administration.

Several of the older institutions like City, Queens and Hunter have world-class reputations; for example, five of the latter's undergraduates have gone on to win Nobel prizes; it is second in the nation in educating undergraduates who ultimately earn their PhDs; and seventh nationally in the number of graduates who are elected to the National Academy of Science.

At the top of the academic tree is the university's graduate centre which promotes and coordinates advanced degree work in the senior colleges; and funds 180 distinguished scholars—40 or 50 of whom are based in the graduate centre building on West 42nd Street—while the rest are distributed among eight university campuses.

In 1967 the Mount Sinai School of Medicine affiliated to the university—although it remains financially autonomous and self-supporting under its own board of trustees.

CUNY is, then, a highly complex and variegated animal; reflecting the diverse needs of a rapidly changing and heterogeneous metropolitan environment it offers a vast range of study opportunities at many levels in a variety of settings. Environmental, architectural and ethnic contrasts abound.

Despite the richness of this diversity, however, and the geographic and intellectual space separating college from college and tier from tier, the institutions remain locked together in the intimate symbiosis of the transfer system.

Although there are centrifugal forces at work, for example, some colleges consider themselves closer to academic values than others and seek an academic reputation independently of their parent body, the centrepetal forces are on balance stronger.

Funds for the individual colleges, for example, are allocated by a central office presided over by a chief academic and administrative officer—the chancellor.

In addition there is just the one staff union for all the university's academic personnel, the student aid programmes and admissions system are centrally administered, and computer facilities are shared.

There is also perhaps a more profound sense in which the university has had to pull together and recognize a shared destiny.

To the mid—1970s the City University of New York was dealt a cataclysmic blow after its host city announced to the world that it was on the brink of bankruptcy.

Three years of stringent budgets and endless controversy about how the university could save money finally culminated in 1976 with the temporary closure of the university after it ran out of funds.

A combination of the State of New York eventually agreeing to bail CUNY out was the end of one of the university's most famous assets—the 129-year-old tradition of offering free based students free tuition. Between the academic years 1975-76 and 1977-78 the university suffered a budget cut unparalleled in the experience of any major university in the United States.

Within two years student numbers had dropped by more than 50,000, and faculty and staff numbers had been slashed by 6300 positions.

The end of free tuition, the adverse publicity, the raising of admission and retention standards, the cut back in course offerings and student services all conspired to frighten off huge numbers of potential students.

Despite the fact that full-time students were protected from bearing the brunt of the new tuition charges by state and federal financial aid programmes their numbers have dropped by 18.8 per cent since 1975. Most seriously affected have been part-time numbers which have dropped by nearly 50 per cent. (There is no aid available for part-time students.)

The measures had the combined effect of hitting the weakest the hardest—of penalizing the working poor; the very people for whom the university had traditionally felt especially responsible.

A longer term consequence of the financial crisis has been a fundamental shift in the control of the university. Up until 1976 the City and the State shared the major proportion of the funding now. Now the State is in the process of taking over all responsibility for public funding of senior colleges. (It already has control of the new Board of Trustees.)

There is also some doubt about the city's willingness and ability to continue funding the community colleges. In recent years New York has resorted to reducing the budgets of all public services in an attempt to stabilize its finances and equilibrium does not appear to have been achieved yet.

On the academic front the university is adopting a subtly subtly approach to the changing fashions of student demand for new vocational courses which could only have a limited life but might involve heavy investment. The important thing said the chancellor, Robert Kibbee, is to "fine tune the system".

On an institutional level there is concern that the identity of individual colleges should not become blurred. In future it seems likely that colleges at all levels of the system will be encouraged to refine their academic missions to reduce the duplication of courses.

The problem of what to do with staff in subjects for which student demand has fallen will also have to be met. Although there are unlikely to be any redundancies among tenured staff (more than 99 per cent of the professoriate) there will well be losses among adjunct faculty. Staff retraining, redeployment and early retirement are also options.

One of the principle challenges the university will face in the next 15 years is eliminating down in size in response to falling student demand caused by demographic factors. Crucial questions currently being considered include how to preserve staff morale and how to protect the integrity of individual disciplines.

In short therefore the City University of New York is facing many of the same kinds of problems that universities throughout Western Europe and North America are currently being confronted by—but in this case the additional social and economic problems of the poorest city in the world make easy solutions even harder to come by.

Sax and the solo artist—or how the festival was won

Alan Franks picks the plays from this year's National Student Drama Festival that should stand the test of time

The National Student Drama Festival has long been lumbered with a sort of retrospective prestige. "How interesting", people say when they read the programme. "You know Timothy West, the chap who's just been playing Churchill on television? Well, he was in the very first festival, in 1956. Directing a Thornton Wilder play."

It is understandable that the seeds only become interesting when the flower blossoms, but this year's festival, the twenty fifth, has thrown up a few plays and performances that deserve a mention before posterity grabs them.

Two of the eight productions which transferred from last month's festival in Southampton for a limited run at the Old Vic are to have another airing at Edinburgh in the summer. One of these is the York University entry, *Milktrane*, which in Southampton picked up more prizes than it has actors. It bears out the time-honoured principle, that if you haven't got a play to suit your star, then write one.

In this case it was the star in question, James Maw, who did just that, in conjunction with saxophone player Andy Hampton. Maw plays the part of a high-fashion punk who keeps embarrassing himself with his own excesses. He comes across as a kind of middle-class Sex Pistol strutting in front of his bedroom mirror, but who would blush if his mother walked in.

The score is very subtly worked by Hampton to keep pace with the lead's changing moods of violence, contrition and fantasy. It is a genuine duet of words and music with a strangely 1950s feel to it, given the aggressively late 1970s placing.

The spacse houses at the Old Vic were hardly the place for something that owes more to cabaret than to drama, but it is hard to see this production being anything other than a name-maker in the grand manner when it gets to Edinburgh. James Maw has already captured a deal of critical acclaim in Southampton, and he has done it by giving a deceptive impression of versatility. Deceptive, because he is in fact sticking rigidly to just two modes of comic caricature which happen to be at either pole of the social spectrum.

In case audiences might worry that York is turning out Johnny Rotten, he switches midway to a very droll version of a mincing media trendy, then cutting back and forth between that and the punk with his fantasies of picking up a debutante on the train home.

Maw and Hampton picked up the Best Actor and Best Music awards respectively, and on the showing at the old Vic, deservedly so. No doubt they will be glad to swap the sight of an ocean of empty stalls for the 100-seat auditorium in Albany Street, Edinburgh.

Near by in the Heriot Watt Theatre will be the other Southampton "veteran", a haunting and enigmatic work called *Kafka's Last Request*. With their tradition of success in the festival it is not surprising to find Brenton Hall College, Wakefield, setting standards again. This was the winner of the *Sunday Times* Playwrighting Award this year. Any echoes of Beckett in the title are not entirely misleading. The author and director, Eric Prince, has taken extracts of Kafka's diaries between 1910 and 1923 and scattered them into the mouths of a five-strong unit with an androgynous "K" figure as the pivot.

Broken down and then regrouped in this way, the extracts turn into a tortured chronicle of Kafka descent into despair at the end of his life. The five are dressed like bank clerks and move in patterns around a bare and lugubrious stage, freezing into Magritte-like tableaux. It is a device by which the sinister phantoms that for Kafka lurked behind bureaucracy, as in *The Trial*, are strangly embodied.

The Kafka figure, which is at once led by and leading the chorus, is played with passion by Cheron Bryson, and her performance should attract as much attention as James Maw's when the play arrives in Edinburgh.

In a year which has seen a glut of new and modern plays, as well as those in the "group creation" category, the classics have got a scant showing. However, Dickens was there by courtesy of the Royal Scottish Academy of Music and Drama and their brave version of *Great Expectations*.

A compact cast and a Dickensian gallery of characters were hardly made with each other in mind: in this adaptation there are 32 of the first and eight of the second. So when one actor, without the use of costume changes, is called upon to play the hurly Joe and the frail Aged Parent, with the small matter of Lezarus, Startop, Arthur and river police in between, it is hard to avoid the impression of resources being strained to breaking point.

As each character appears, he or she reels off a verbatim textual account of his or her physical characteristics, often in ludicrously explicit contradiction of appearances.

Dickens would have applauded the thoroughness of this transcription by the director, Edward Argent and his six collaborators, but it is their very insistance on fullness that plants the seeds of dramatic failure.

If Bretton Hall's second contribution to the festival almost overreached itself, it did so for a slightly different reason. Shaun Prendergast's *Potter's Wheel* is an exuberant mass of a play which was saved from an even greater incomprehensibility than the author had in mind by a collection of very committed performances.

In Southampton it won the Best Production Award, and again with good reason. But what on earth is going on? Libby Porter appears to have been widowed when her husband, a British Army colonel, is killed in an Ulster car bomb. Then she finds herself in an internment centre, or is it a training camp, where she receives the bestial attentions of a man in a dark suit. There are guards. There are impotent inmates playing chess. There is the weather that darkens symbolically on the landscape outside. There is probably an essay on emotional thralldom struggling to get out.

When detractors of this festival complain that it has germs of ideas in the way a school sanitorium has germs, it is possibly this kind of obscurantist work which they have in mind. But Shaun Prendergast is rightly unrepentant about it all and says you can make of it what you will. There is some writing of a high, quirky order here, and if he only manages to shuffle his cards with a little more precision, he is bound to come up with something of real value.

It was Anne Carter's Libby which won her the Best Actress Award.

There was nothing cryptic about *Privitus, Privitorium, Privet Hedge* by Angie Farrow, who in 1974 won the playwrighting award for *The Blue One*. She had spent the time since then as a teacher, and you can see why she has given up to direct and write with Bristol's Bush Telegraph team. Her play is a barbed farewell to the staff-room. Headmaster delivers admonitions in

Andy Hampton (left) and James Maw in Milktrane

Stanley Unwin-style gobbledigook; dotty head behind a mountain of in-trays defends the importance of administration; ageless spinster (Welsh College of Music and Drama) performance of David Hare's *Knuckle*. As Patrick Delafield and Grace Dunning, Ciaran McIntyre and Jill Fradd gave a pair of mature performances as the morally bankrupt stockbroker and his housekeeper. Nigel Hook's Curly flattered one of the hardest parts going in the festival.

The choice of such a play was interesting in itself: full of textbook Leftism and dimly conceived parent/enemy figures. Add to that a murder story fit to lure the most hesitant of theatre managements and you have something that might have been cooked up by Agatha Christie after a week's confinement with Karl Marx. All the same, David Hare is a decade on from studentship, and the Anglo Farrows and Shaun Prendergasts could learn a thing or two from him. There are worse beacons to be followed.

That plausibility was not absent from the Dragon Theatre Company's (Welsh College of Music and Drama) performance of David Hare's *Knuckle*. As Patrick Delafield and Grace Dunning, Ciaran McIntyre and Jill Fradd gave a pair of mature performances as the morally bankrupt stockbroker and his housekeeper. Nigel Hook's Curly flattered one of the hardest parts going in the festival.

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Art for art's sake enjoys a Chinese revival

Fine art is not a subject of study that fits easily into the utilitarian ethos of the new China. It hardly seems relevant to the "four modernisations". It inevitably stresses the affective and the individual. Yet along with the rest of Chinese higher education fine art colleges have been restored.

Peking's Central Institute of Fine Arts is in a quiet back street just off the city's main shopping street. Its atmosphere is genteel and even refined by the standard of most Chinese colleges. Its walls are not bare but covered with the pictures painted by its students and teachers. An exhibition of copies of traditional Chinese paintings of the Tang, Sung, and Ming dynasties by the institute's students has just opened—the first in the institute's history, and the first in all China, since the end of the Cultural Revolution.

Mr Chen Fei, the deputy director, explained that competition was intense to enter the institute. They received very many applications for very few places, 1,000 for 50. Applicants had to submit examples of their work and only some—200 last year—were allowed to take the entrance examination, a special one for art students distinct from the normal academic entrance examination for other universities.

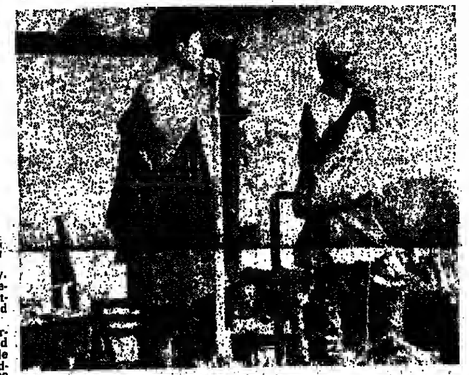
The majority are school-leavers, but because of the competition for places the average age of entry is between 18 and 22, higher than for most higher education institutions. Last year a special senior middle school (for pupils aged 14 to 16) was attached to the institute. It is a boarding school to which children of artistic ability can come from all over China.

The institute has five departments—traditional Chinese painting, Western painting, graphic design, sculpture, art history and theory. It is pleasing to create a new department of Chinese Festival painting, and has a sculpture unit and a research unit in wall paintings.

It has only 203 students, undergraduate, postgraduate and in-service, although a considerable expansion is planned and new buildings are going up. It also has 400 staff, of which 156 are teachers. The extraordinarily favourable staff/students ratio has two causes.

First, Mr Chen explained, it was due to the special character of the institute, which had not only to teach students and conduct research but also to produce works of art. It was the base of many working artists.

Second is the legacy of the Cultural Revolution. Before 1966 the institute had over 400 students but it suffered greatly during the Revolution. It was closed from 1966 to 1974. For three and a half years the staff and remaining students were all moved en bloc to work in a commune. When they were allowed back to Peking they were subjected to very severe criticism at public meetings and were denounced again to five years (six for sculpture). A lively debate is now going on within the institute about whether to press for an extra year, although Mr Chen and the majority of his colleagues feel five is sufficient.



Sculpture is acceptable at Peking.

Students specialize in one of the four main areas, traditional painting, western painting, sculpture, or graphic design. They all have to study in addition the history and theory of art, Chinese language and literature, and a foreign language (and, of course, the ubiquitous political education and physical education).

For the first part of the course they study basic courses, which once more includes life drawing which was banned in 1966. For the second part they undertake more creative work.

Perhaps because of the memory of the philistinism of the years between 1966 and 1976, and the peripheral role that fine art can play in China's modernization, the role of the institute seems to be to preserve the culture of the past rather than to invent the art of the future.

The result is that life drawing is acceptable because it is a vital aid to improved technique, but abstract art is frowned upon because it is often an expression of anarchic and inaccessible individualism.

Most of Peking's students become teachers, professional artists, or work in publishing or museums. The institute is perhaps the leading art institution in China and is responsible directly to the Ministry of Culture, and there are only six others, all with modest numbers.

The Peking institute's students are clearly very proficient and talented. If they seem to be lacking in creativity, this has much more to do with the different conceptions of art in China and the West. In the former aesthetics are a question of formal technique and grace, rather than of individual interpretation. In any case the fact that the institute has survived and is apparently thriving (even if it keeps a low profile) is some indication of the greater diversity that is tolerated in Chinese higher education today. Everything, it seems, is not being sacrificed to the demands of the "four modernizations" as it was to the dogma of the Cultural Revolution.

Peter Scott

The rise and rise of the civil service

Lord Crowther-Hunt examines the continual gathering of influence by our bureaucratic elite. He notes too the 'creep' principle, whereby potential threats to its power monopoly are absorbed or neutralised.

The power of the Civil Service has increased, and is increasing but does it necessarily follow that it ought to be diminished?

Some would challenge the premise. Others would accept it and go on to argue that Britain's abundant ills today owe much to serious defects in our bureaucratic ruling class. So does what has happened in the Department of Education and Science in recent years shed any light on this controversy?

The inadequacy of our civil servants was, of course, the main findings of the Fulton Committee Report on the Civil Service published in 1968. The Fulton Committee had been set up in 1966 because of the growing suspicion that our administrative machine did not match our contemporary needs. Fulton's confirmation of this suspicion was set out in the forthright, and much criticized, opening words of our report: "The Home Civil today is still fundamentally the product of the nineteenth-century philosophy of the Northcote-Trevelyan Report. The tasks it faces are those of the second half of the twentieth century. That is what we have found; it is what we seek to remedy."

So the Fulton Committee made a whole series of radical recommendations to make the Civil Service more professional and thus more able to tackle contemporary problems. The main ones were immediately accepted by the government of the day—only to be quickly sabotaged by the Civil Service as the months and years went by. This, in itself, says much about Civil Service power. But not only were the main reforms sabotaged, the Civil Service has even had the effrontery to spread about the myth that Fulton actually won.

Thus in 1978 a government White Paper apparently conceded victory to Fulton with the assertion that the "acceptance" of the Fulton Committee's report had "resulted in a number of radical changes in the organization and management of the Civil Service". In fact the reverse is the truth. The basic criticisms which Fulton made of the Civil Service in 1968 are just as valid today as they were 12 years ago. The new Civil Service Department (which was to have been Fulton's "battering ram" of change) has been enormously busy these past 12 years keeping things much as they were. So much for radical reform.

A good illustration of the way the Civil Service handled Fulton was the fanfare which greeted the appointment in 1976 of James Hamilton (now Sir James Hamilton) as Parliamentary Secretary in the Department of Education and Science. The Civil Service hailed him as "Fulton Man"—implying that this was just the type of appointment the Fulton reforms were designed to produce. This was because Hamilton was a scientist who had previously worked in the Royal Aircraft Establishment and had been Director-General of Concorde in the Department of Technology, and certainly Fulton had urged much more job opportunity for scientists and other professionals in the Service—and particularly more opportunity for them to get to the very top levels of the Service. But, in fact, this type of thing—this sort of appointment was a fundamental, and probably wilful, distortion of what had been the main thrust of the Fulton Report.

That main thrust was the root and branch condemnation of the concept of the "generalist" administrator which was, and still is, the basic philosophy on which the Service is organized and run. The Fulton Committee summarized the concept thus: "The ideal administrator is still too often seen as the gifted layman who, moving frequently from job to job within the Service, can take a practical view of any problem, irrespective of the subject matter, in the light of his knowledge of the administrative machine."

As a result of so exhaustive examination of the work civil servants were actually doing (which, among other things revealed that Administrative Class Civil Servants on average remained in one job in the Service for 2.8 years before being moved to some other post often in a very different area of government activity) the Fulton Committee reached the view, endorsed by the two generalist Permanent Secretaries who were also members of the Committee, that many generalist administrators do not develop adequate knowledge in depth in any one aspect of the department's work nor even in the general area of activity in which the department operates. Often they are required to give advice on subjects they do not sufficiently understand to enable decisions whose significance they do not fully grasp."

So, the Fulton Committee, with its two traditional generalist Permanent Secretaries, concluded that the cult of the generalist "is obsolete at all levels and in all parts of the Service". Accordingly, the Committee made a whole series of recommendations to bring about that state of affairs and thus bring our civil service into line with the Civil Service of the United States and with those of other major European countries which, in their handling of their domestic affairs since 1945, have a much better track record than we have. And in those recommendations the crucial criterion for a person's fitness for a particular appointment was to be the relevance of his education, qualifications and experience to the particular job he was being called to do. So the concept of relevance was to replace the concept of the generalist.

Against this background Hamilton's appointment as Permanent Secretary in the Department of Education was the very antithesis of what Fulton had in mind. He was even more of a generalist than his predecessor Sir William Pile who, although he became Permanent Secretary of the Department after service in the Department of Health, the Home Office and as Director General of the Prison Service, nevertheless he had in his earlier career served for many years at lower levels in the Department of Education. Not so Sir James Hamilton, he had never previously worked in the Department before he was appointed head of it. Now it was no part of Fulton's scheme of things that scientists should simply become generalist administrators in areas in which they had never previously worked. The basic Fulton idea was that scientists and other professionals should administer areas of work for which they had relevant qualifications and experience. So, since the department had virtually nothing to do with science (in spite of its title) Hamilton's background was almost entirely irrevelant. Whatever his other merits he was certainly not a Fulton man.

But it is not just in maintaining both the concept and the superiority of the generalist administrator as fundamental to the recruitment and development of civil service staff that the Civil Service has flouted Fulton—so it has, too as for no long range policy planning is concerned—and again this has been well illustrated in the Department of Education and Science.

As Fulton emphasized, long-range planning is clearly the sine qua non of successful government. But we found that government departments were singularly ill-equipped and ill-organized for this purpose. This was partly because long-range planning was the responsibility of officials whose prime duty was to deal with the crises of the moment—and it was also because they were the wrong sort of officials anyway. So we recommended that each department should have a planning unit, headed by a senior policy adviser, and charged with responsibility for major long-term policy planning. A Fulton-type planning unit was to have two essential characteristics. It was to be staffed largely by experts or specialists in a department's main field of activity, and not by generalist administrators. Secondly, its members would not be in charge of, or part of, the department's operational divisions.

Six years after Fulton, when I became Minister of State in the Department of Education, I was able to see for myself how the department's planning organization then matched the Fulton specifications. The short answer is, it completely failed to do so. The planning organization essentially consisted of the heads (five under-secretaries) of the various operational divisions who were heavily immersed in the problems of the day (their primary concern). Secondly, three of members of the planning unit staff which serviced this planning organization were generalist administrators. The unit contained no educational experts of the type Fulton had in mind—no educational psychologists or sociologists or professors or lecturers in education.

These planning arrangements were severely criticized by the House of Commons expenditure committee in 1977 (in part, at least, on Fulton grounds) — following which some fairly substantial changes have been made. In particular a new "deputy secretary planning command" has been created to oversee the planning operation. And the planning unit itself has been nearly doubled in size by the inclusion of members of the inspectorate, economists and members of the "financial modelling team". So, after further pressure and nearly 10 years after Fulton, the planning organization has taken a step in the Fulton direction. But the heads of the various operational divisions are still, in effect, in command of the departmental long-range planning work, and a substantial part of the time of the "deputy secretary planning command" is taken up by having to deal with the day to day problems of teachers—including pay, numbers and training. So he is not exactly the sort of senior policy adviser that Fulton had in mind. Moreover, is the expanded planning unit—there are still no sociologists, educational psychologists or professors or lecturers in education. Nevertheless—some progress here; yet 12 years after Fulton the department's planning organization still falls short of Fulton's recommendations.

Besides telling us something about the way Fulton has been "implemented", the Department of Education and Science also sheds some light on the question of civil service power.

Ministers, of course, do lie the last analysis have real and ultimate power—witness the major changes of direction Mrs Thatcher's government has so far imposed. But against this it has to be recognised that the ambit and detail of government business is now so vast that the job of controlling civil servants *over the whole range of their work* has become increasingly difficult, if not impossible, for ministers and parliament. It is in this sense that the power of the civil service has increased.

For one thing there's the question of the vast growth of the bureaucracy. In 1900 there were some 60 ministers controlling about 50,000 civil servants. Today we have about 100 ministers seeking to control about 700,000 civil servants—an infinitely more difficult task on numerical grounds alone. And Prime Ministers have not helped here by their regular ministerial reshuffles. So the average ministerial tenure in a particular department is woefully short—and this greatly undermines ministerial power.

The Department of Education and Science is an example of this letter point.

Since 1944 there have been 20 ministers of education—which, on average means rather less than two years each. This rapid turnover of ministers has not been confined to the top departmental ministers. When I moved into the department as Minister of State in October 1974, I was number two to Reg Prentice. I had responsibility for the whole of further and higher education in England and Wales, including the universities. I stayed in the job only 15 months—which was not long enough to develop and see through any major new policies, even though it was soon abundantly clear to me that our overall strategies in this area needed fundamental reappraisal. The fact that Reg Prentice was replaced by a new Secretary of State after I had been there eight months enables the Civil Service to fight back against some of the new initiatives I had got under way with Reg Prentice's blessing. Yet my stay was just about par for the course.

My immediate predecessor had been in the job only six months—and my four predecessors in Wilson's government of 1964-70 had lasted, on average, 17 months each.

So with Secretaries of State for Education averaging under two years each and with Ministers of State in recent years averaging less than 17 months where can you really expect the balance of power to lie between itinerant ministers and their permanent officials?

The fact that during the lifetime of the 1974-79 Labour Government there were three successive Ministers of Education was clearly one reason why that Government did not implement its election manifesto pledge to "withdraw tax relief and charitable status from public schools". The first of them, Reg Prentice, met very considerable civil service resistance, but he remained determined and was still fighting when he left office after 15 months. His successor, Fred Mulley, with no previous government experience in education matters was met by a superbly delaying minute from the then Permanent Secretary, Sir William Pile:

"First, the term 'public schools' has no definite meaning . . . There are substantial problems of definition involved in discriminating between one kind of school and another. Secondly, there is at the root of the matter the problem that charitable status is not enjoyed by the schools as such but by the institutions which provide them. Thirdly, any progress in relation to the withdrawal of tax reliefs is critically dependent upon finding ways of redefining charities or discriminating between charities . . . Treasury Ministers are satisfied that it is not practicable to discriminate between policies and covenants intended to finance school fees and other policies and covenants. Last, an independent school provided by a charity enjoys a 50 per cent relief from rates on the school site . . . The withdrawal would involve legislation and the question of discriminating between one kind of school and another would of course have to be faced."

Pile concluded that immediate responsibility for action "lies primarily out with you but with the Home Secretary, the Chancellor of the Exchequer and the Secretary of State for the Environment . . . I cannot think of anything that we ourselves can usefully do in the interim".

And Mulley couldn't either in the 15 months he was there before being replaced by Shirley Williams. By these there was hardly time for the new minister to start afresh with the hope of getting any legislation on this subject through Parliament before the general election—particularly since the Government had lost its overall Commons majority and was forced into the Lib-Lab Pact by March 1977. So cheaping ministers and the natural passage of time helped the Department to win this particular battle.

The traditional role of Whitehall official committees also enhance civil service power. Naturally enough, before issues are ripe for ministerial decision they have to be fully investigated and considered by interdepartmental official committees. Ministers themselves are not present at these meetings. When, after weeks or months of study and discussion, recommendations then come forward from these official committees to ministers individually, or to committees of ministers, it is increasingly difficult not to accept those recommendations—given the growing complexity of the problems involved and given, too, the growing and almost intolerable burdens of work that ministers now have to shoulder.

In recent years there was a further Whitehall development which gave added force and power to these committees of officials. This was the technique and system of programme analysis and review (PAR) as it was called in the jargon of the trade. It was simply a quasi-scientific means of subjecting a particular programme or policy to a specialist rigorous scrutiny—with special emphasis on a cost benefit approach. For example, Mr Heath's Government decided to do a PAR on the contributions made by various government programmes to the preparation of young people for the world of work—including the training and further education of the 16 to 19-year-old groups. When I was Minister of State for Education I discovered, quite by chance, that this PAR was then wall under way. For over two years a group of interdepartmental officials had been making an intensive study of the problems involved. But no ministers were ever present at their meetings. Nor were there any meetings of ministers during this time to review the progress of the work or to give officials a particular steer in the light of the problems they were uncovering or illuminating. So when the voluminous report and recommendations finally and urgently came before a meeting of ministers—there was little ministers could do but accept the main recommendations—with most of the ministers not having the time to read the report in full. And since at the time PAR reports were never published the basic evidence and advice on which ministers reached their decisions was not subjected to public scrutiny. So here is have a splendid illustration of the power of civil servants which comes from years of confidential inter-departmental work and study put before ministers with inadequate time to consider and absorb it—and the whole thing still further compounded by the cloak of secrecy.

However, because the Government felt unable to respond to the growing pressure that PAR reports should be published, the whole system of PAR has been driven still further underground.

One final aspect of growing Whitehall power is what I have called Civil Service "creep"—the way the Civil Service in recent years has been able to absorb or neutralize a whole series of rival power centres which might otherwise have weakened its power monopoly. One example must suffice here—the University Grants Committee. By intention it is a body of independent academics to advise the Minister of Education about university education and to distribute government money to universities in a way which maintains their independence of the state to act as a buffer between the universities. But is it really independent body? In fact, it is completely dominated by bureaucrats. Department of Education officials "advise" the Minister on the UGC which academics shall be appointed members of the "controlling" committee, which normally meets once a month. Secondly, the 120 or so full-time members of the UGC's permanent staff are, in fact, almost all civil servants on temporary loan for a two to three year period from the Department of Education itself—and they are expected by the Department between the Department and the UGC in the same way that the Department moves its officials around between the Department's own individual branches. And as if all this were not enough to ensure adequate departmental official oversight of the workings of the UGC there is another nice little bit of departmental penetration. When the UGC sets up its various subject sub-committees it appoints as members of the UGC their regular monthly meeting there almost inevitably meet a fellow-member of the Department of Education—the Department's Assistant Secretary, one of the Deputy Secretaries, for example.

From the sabotage of Fulton, then, to the bureaucratic domination of the UGC is simple evidence of the power of civil servants. But does it follow from this that our democratic system of government is being fatally undermined—that power of the people and their elected representatives is being usurped by the power of a bureaucratic elite? And if it is, is this necessarily something that should be changed? These are other questions to be answered at another time.

The author is a fellow of Balliol College, Oxford, and a former minister of state in the Department of Education. He is also co-author with the journalist Peter Kellner of a book published last week entitled The Civil Servants: an inquiry into Britain's Ruling Class *(Macdonald and Jane's, £6.95).*

Reginald Herbold Green examines survival plans for the Western industrialized world

A chance to make sense out of economic chaos

When we look at international economic relations in 1980 it is critical to recognize two realities. Like Marley in Dickens's *Christmas Carol*, the old international economic order is dead to begin with. What we have is not any new international economic order, let alone the order proposed by social democratic or Third World coalitions. The 1970s have seen the rise of the new international economic disorder. Chaos is not a future danger but a present reality.

The international economic world in which we live is no longer safe, predictable, benign. Unemployment and inflation rise hand in hand. Balance of payments crises and credit crunches strike suddenly, painfully, frequently. The new protectionism which began by constricting the growth exports of the poor countries to Europe now marches with seven league boots—United States barriers to EEC steel, EEC limits on Japanese automobiles, general United Kingdom import quotas are the common coin of serious discussion. Currency exchange rates rise and fall violently with dire effects on inflation during downturns and on export industry profits, investment and employment on the upswing. The international banks fear that major defaults by Third World economies could trigger a 1930s-type financial crisis. Petroleum prices leap ahead but despite this real doubts exist as to whether there will be adequate supplies at any price. Food supplies also look doubtful—major famines in the Third World in the 1980s are quite probable but food reserves to meet them are much more problematic.

In short, the last time the world saw conditions like today's was the late 1920s and 1930s. Then Yeats wrote: "Things fall apart, the centre cannot hold, mere anarchy is loosed upon the world. . . ." So it appears today to the political economic analyst as much as to the man on the Clapham omnibus or the woman in the VG shop.

What was the old international economic order? Why is it sometimes called the Bretton Woods order? Or, more nostalgically, the golden age of western industrial *capitalism*?

The old order was constructed in the late 1940s, largely by the United States and the United Kingdom. It was designed to make the world safe for industrial capitalist democracies, to avert massive depressions, to prevent trade wars that caused mutual losses of jobs and exports, to make free trade an engine of global growth. It sought to avoid the mistakes of 1918-20 and to forestall the consequences of 1922-39 and 1939-45!

The order was rooted in the three Bretton Woods institutions named after the site of its origin conference. These were the International Bank for Reconstruction and Development (World Bank), the International Monetary Fund (IMF) and the General Agreement on Trade and Tariffs (GATT). The bank was to provide funds first for the reconstruction of Europe and second for the development of underdeveloped countries and colonies. That involved, it would, it was believed, private capital flows and encourage private capital flows and create sustained growth. The fund was to provide stable exchange rates and freedom from currency inconvertibility. To do this it was to have funds to lend in emergencies and powers to force borrowers to "behave better". The GATT was to provide a forum to negotiate down the tariff and other barriers which had strangled international trade in the 1930s. Together the IMF and GATT were to underwrite stable currencies, free convertibility, liberal trade and world economic growth led by mutual export increases.

Over 1945-69 the international economic order worked more or less according to plan. Some did better than others, there were short recessions, minor financial crises happened. But, if one looked at the world from the viewpoint of the western industrial capitalist states who had designed the Bretton Woods order, it was a golden age of sustained growth, stable prices, low unemployment, relatively low social tensions.

On the periphery things looked different. The Bretton Woods institutions were basically "one dollar, one vote" bodies, like private banks rather than governments which looked to the promotion of individual national welfare. The prosperity of the centre did not trickle down very fast or very far. When it did it seemed to stay in pockets and portions like those of oil, quadrupled and states with real need could not find the physical grain for love or money.

In the north many began to doubt the virtues of growth. Was it sustainable? Did it lead to happiness? Were not high technology and huge scale soil destroying? At the same time the demand management tools of the 1945-70 era showed signs of wear and tear. Inflation crept up from boom to boom, unemployment grew from slump down to slowdown. The 1972-73 boom in the north was marked by frenzied speculation, high inflation and predictions of a severe 1973-74 slump before the OPEC bombshells landing to the Tehran agreement, the fall embargo, the "Christmas present" price redoubling.

To the south discontent grew. No longer was it believed that growth and modernization would allow their economies to catch up. Trade restrictions began to mock those who tried. Foreign corporation "trickle up" in profits, favourable transfer prices, technology sales far outstripped the "trickle down" of aid. The stage was set for the revolt of the outsiders—the intellectual script written, the political actors rehearsing.

OPEC rang up the curtain. Its ability to take on international economic order decisions and make it stick electrified both north and south. Few believed simple copies of OPEC were likely after the initial shock. The south's potential to turn from mendicancy to confrontation was proved. The case for a serious dialogue on negotiated structural change was heard and sometimes listened to in the north as it had long been in the south.

Between 1976 and 1978 the crisis faded. The north seemed set fair to restore the old order—5 per cent growth, 3 per cent unemployment. Oil prices fell in real terms. Inflation and unemployment dropped. Trade restrictions grew more slowly. Beyond OPEC, which bought more goods, deposited its funds in north banks and began to seem a safe status quo oriented junior partner, the revolt of the Third World was apparently repulsed at little cost.

The last 18 months have dashed those illusions. Twenty per cent interest rates, 20 per cent inflation and 10 per cent unemployment are now on the verge of being common in the north—an incredible situation as recently as 1977. Trade restrictions marched on and currency fluctuations grew wilder. Oil prices doubled once more. The apparently regained food margin has vanished once more with a few bad harvests. The anger of the excluded south is now redoubled by the desperate plight of the poor and the trade restrictions threatening the continued advance of the not so poor. Bankers and banking specialists whisper that a series of Third World defaults could bring the global financial system down in ruins in the way the collapse of the Kreditanstalt in Austria did in 1930.

What are the prospects for a new and viable order appearing out of the present new international economic disorder? The outlook, according to a variety of studies ranging from Interfuture's *Facing the Future* (OECD, Paris, 1979) to the Brandt Commission's *Programme for Survival* (Pan, London, 1980), is bleak if present trends, tactics, policies continue. This is as true in the capitalist industrial as in the peripheral economies and, to a significant degree, applies to the socialist industrial economies.

Is this an inevitable result? Most of the studies conclude not. Interfutures subtitle, "Mastering the probable, managing the unpredictable" illustrates its authors contention that moderate growth, lower unemployment, more stable prices, lessened global tensions can be achieved. The Brandt Commission report articulates a series of overlapping interests ranging from avoiding famine and mass price explosions in the North to regulating transnational corporations—Hoffmae La Rocha and Anglo American in the United Kingdom as well as Lonrho and Anglo American in Zimbabwe. It argues that the transfer of purchasing power to the periphery via aid and back loans and trade based on increased north imports of processed and manufactured goods is the only way for the north to escape from the stagflation trap or the south break out of the poverty trap.

That approach challenges the north's present convoluted wisdom. The wisdom does not deny that there is a crisis. Nor does it reject the contention that it is a world economic order crisis. It sees the crisis as basically within the capitalist industrial economies of north, singly and together. Except for OPEC and oil it views the south as peripheral to the crisis or its solution. Thus at the Manila United Nations Conference on Trade and Development (UNCTAD) and the Tokyo Negotiating Round of GATT, the north neither accepted south proposals nor rejected them. It engaged in a etra between a premier discussion and a nightwatchman on duty cricket pitch. If the Brandt view is correct, of course, that approach is the highroad to disaster.

There are five possible roads ahead. The first identified, perhaps unfairly, with the Club of Rome's *Limits To Growth* study is "what we have we hold" or "each for himself and the devil take the hindmost". This is the present dominant north strategy whether it takes the form of hard lines as in the 1974 threats of military confrontation with OPEC or of feather pillows with the talking out of all major south proposals at the Manila UNCTAD.

In a world economy which has moved toward deep depression steadily, if fitfully, for a decade it is a dangerous line. It looks too like a modern variant of the 1920s. For the weak, whether the very poor economies on the periphery like Bangladesh, Tanzania or the very fragile and brittle at the centre, it is a strategy that spells disaster in to employment, inflation, investment, growth and external balance.

"Back to the Golden Age" was the north's rallying cry over 1975-76. Mr Secretary Kissinger argued that the old order had served the world well. It needed to be restored with a bit more aid and a few peripheral economies upgraded to be junior members of the rich men's clubs—the Organisation of Economic Cooperation and Development, OECD, on most issues and the "Group of Ten" on monetary matters.

This was tried over 1975-77. It failed for three reasons. The Opec and Newly Industrializing (NIC) economies were not offered enough to accept them. There was little in the approach for most of the south—1945-70 had not been their Golden Age. Finally, even with external pressures off, the OECD recovery of 1976-78 faltered and failed.

Modified Golden Age proposals are often associated with the Trilateral Commission (Japanese-EEC-North American leaders of state, business, academy). The Interfutures report is of this type. Real changes are proposed, bargained deals on oil and on other raw materials, on manufacturing and on finance. On paper these look impressive and realistic. In practice Trilateralists in office have felt unable to advocate, let alone act on these grand designs. Why?

They are very academic. Real interests, classes and people are pushed aside in the analysis, as they cannot be in the real world. They are very platonic and today's world is not one in which peripheral nations, trade unions or small businessmen accept the Guardians' word as revealed truth. They are a surrender of bits of power and profit to preserve dominance, indeed on one reading to enhance the dominance of large corporations (TNCs) in north as well as south.

The new international economic order was proposed in 1975 by the south (under the umbrellas of the Group of 77 and the non-aligned). It is the global counterpart of radical social democracy—a point not unrelated to its relative acceptability to the Netherlands and to Scandinavian states.

What it seeks is more equal participation, participation in industrial production, in setting or influencing prices, in control over and creation of knowledge, in setting frames for regulating and guiding TNC decisions and in running international organizations with one state one vote not one $ one vote. This has had two problems. First, the north resisted by and large. Secondly, with the new international economic disorder's rise, the new order is almost as out of touch with present reality as "what we have we hold". There is no properly functioning system in which participate more fairly and more evenly. This may in large measure relate to the north's resistance and to some degree to OPEC's tactics. In any event it is now a fact.

The fifth approach is that of the Independent Commission on International Development Issues (Brandt Commission). Over two years its 18 commissioners from north and south, conservative and socialist, politician and intellectual, struggled with the data, the analysis and each other to see whether they could agree on a road forward. Surprisingly they did with their *Programme For Survival*, which may be a bargained compromise but is also a coherent programme based on a serious analysis of the international and national economies.

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Lyn Gray and Ian Waitt review the distinct approaches of the European Social Fund and the EEC education policy

Uncommon split on supranational training plan

Britain has been a member of the European Economic Community since 1973. Obvious effects of membership on our national life—such as the Common Agricultural Policy or the effects of substantial net budget contributions—are well known. Less obvious perhaps is the effect of EEC employment legislation which provided a considerable impetus to our own employment protection legislation of the past decade. Recent international events have illustrated the Community's tendency increasingly to act as a political entity. Albeit slowly, EEC policies may be seen as having a growing effect on the constituent states.

Educational policy has been the subject of much debate, discussion and investigation within the EEC. In parallel to the educational aspirations of the EEC there has been a growing substantial intervention within education and training by means of the European Social Fund. This raises matters of fundamental concern: while the Community makes no distinction between education and training, the intervention of the Social Fund has concentrated available resources in the area of training. The Social Fund, as it affects training, responds largely to immediate perceived needs. EEC educational policy has more long term aims. Hence, if EEC educational policy is to have significant impact, it is necessary both to review its aims, and to question whether the current distinct approaches—between education per se and the ESF—require review or reconciliation.

The last decade has seen the establishment of the Directorate-General of the Community for Research, Science and Education, a forum for meetings of the member states' education ministers, an education committee, the recent European Parliament committee for youth, culture, education, information and sport, as separate—if minute—education budgets (of £3,500,000, or 0.004 per cent of the Community budget), and an action programme in education. The latter recognises the strategic importance of education within the Community, and the inseparability of educational policies from employment and vocational training policies.

The action programme covers six major areas. The education of migrant workers and their children was promoted by a directive to member states to provide reception classes for teaching the host country's language, for tuition in the language and culture of the country of origin, and for specialised training for the teachers of migrants children. A number of pilot programmes have been established in support of the directive. A second area is that of transition from school to work, where priority has been given to the promotion of information exchanges, studies of common problems, the educational and training needs of school leavers, ways of stimulating higher participation levels in school and work by young people, the development of educational and vocational counselling, and the training of supervisors and teachers dealing with youth.

Special attention has been given to migrants, to young girls—reflecting the Treaty of Rome's advocacy of equal treatment for men and women—and to handicapped persons. A programme of pilot projects, evaluation studies, study visits and workshops absorb the major part of the small Community education budget. The Community is concerned to encourage "alternative" schemes linking education, training and work, and has set out guidelines for the establishment of coordinated programmes, involving close links between employers and education authorities.

The other four action programme areas are foreign language teaching, students and teacher mobility, the study of European problems in fields (geographical, historical and political aspects), and the extension of information networks and co-operation between education systems. In pursuit of the latter an information centres network is being set up to serve policy makers, exchange information and support the priority areas of the action programme. A descriptive handbook of member states' education systems is also planned.

The inclusion education policies propounded through the action programme have major implications for teacher mobility and teacher education, but progress in both spheres has been, and is likely to remain, very slow. In spite of the Community ideal of free movement of labour there is an exemption in the case of public servants from the freedom of movement laws: as many teachers in the Community could be construed as being public servants there are serious doubts concerning their eligibility to the protection of the freedom of movement legislation.

Lack of command of foreign languages is a major obstacle to professional mobility. The education ministers of the Nine have urged their governments to improve language teaching, to organize training periods for language teachers, and to encourage exchanges for students and pupils. Inter-member state exchanges for educational administrators, teachers and advisers to observe and discuss language teaching techniques have also been promoted, while the example of the Community schools for the children of EEC officials, such as that at Culham in Oxfordshire, have demonstrated how foreign languages ought be used for the teaching of other curricular areas. However, member states jealously preserve their national curricular controls, and are not likely to agree to the supra-national Community control of the curriculum that any rationalization policies for language teaching—whether in primary, secondary or adult and in-service levels—would require.

Similarly, although Community policies would be unlikely to be achievable without some commonality of teacher education policies, the diversity of member states' teacher training structures and procedures make any such commonality effectively unattainable, while training varies from two-year "programmes in non-academic institutions to four to six years of university study, and while training for primary and secondary teaching remains quite separate in some states, but integrated in others.

> "Education is not mentioned directly in the Treaty of Rome but money is set aside to improve employment opportunities for workers in the Common Market"

Philosophies of teacher education, including the relationship between academic study and classroom experience, similarly vary across the Community. In that the philosophies and practices of member states reflect deeply entrenched attitudes towards curricula and the role of the teacher, the harmonization and closer integration of teacher training policies within the community does not seem an attainable ideal in the foreseeable future.

Nor does there seem much prospect for the establishment of common policies for the in-service education and retraining of teachers, when in some member states teachers can attend only short-term refresher courses varying in length from one day to a series of afternoon lectures. The education committee has expressed the view that internal mobility of teachers is a necessary prerequisite to freedom of movement across the Community, and that this should be facilitated by teacher retraining programmes.

Again, the fundamental differences in attitudes between member states in this area makes rationalization unlikely. Indeed, the education ministers of member states have been prevented from meeting for over two years, because of the growing fear in some parts of the Community that further progress towards a Community education policy must inevitably weaken national control over fundamental areas of curriculum and educational planning.

Education is not mentioned at all directly in the Treaty of Rome, although specific reference is made to vocational training. The treaty does allow the small education budget, but in practice much more money is available by way of the Social Fund. The ESF was set up under Article 123 of the Treaty of Rome "to improve employment opportunities for workers in the Common Market".

During the early 1970s fundamental reforms greatly extended the activities of the ESF but it was not until 1975 that, in response to the impact of the economic recession, most of the social fund interventions were geared to coping with youth unemployment: vocational training programmes were set up together with effective placement services.

The European Social Fund is not a public service in the English sense of the words but rather an employment training fund intended to lead to new, stable employment. The fund gives aid under two headings: temporary aid (under Article 4) and permanent intervention (under Article 5). Five categories of person benefit under Article 5: persons leaving agriculture, workers in the textile and clothing industries, young people, women, and migrant workers. Under Article 5, fund finance is available to assist regional development, groups of firms and occupational areas, and handicapped workers. It is the allocation of specific finance to promote vocational training which gives the ESF a significant role in post-school education.

Social fund aid is limited to 50 per cent of the total national public expenditure eligible for aid, or if the scheme is undertaken by a private organization, an amount equal to the contribution of the public authorities. Public authorities must also be able to guarantee the scheme's completion (although they need not be the authorities providing financial support), and aid cannot be extended over more than three years.

In Britain, ESF finance for vocational training is distributed largely by the Manpower Services Commission. The sums of money involved are considerable: ESF monies contributed to the Manpower Services Commission in 1978-79 totalled £50m (of which £22m was contributed to the cost of TOPS courses). However, whatever its merits, the Manpower Services Commission does not have a central role in educational planning: resources which, by way of YOP, TOPS and other short-term courses, have a significant role in educational development are not controlled by the bodies responsible for educational policy in Britain.

Thus, especially important in the context of limits of expenditure restraint, the DES and other local authorities have little direct control over the distribution in Britain of social fund educational finance, even though they may provide many of the institutions in which the ESF sponsored training occurs.

It is the relevance of the EEC member states' governments to countenance supra-national education policies—because of the ideological and curriculum control implications—which has emasculated effective educational policy making. Current EEC educational policy reflects modest if vague aspirations, the provision of small scale schemes, and those ideas which are implemented largely concern areas which do not threaten political change—such as information networks—or else are couched in terms which make them optional.

Although the EEC has developed more coherent policies concerning youth unemployment, effective intervention is prevented by the circumstances resulting from the wish to avoid ideological and curriculum control implications where policies might tackle the educational routes to remedying youth unemployment. Thus preventive policies are not possible; but palliative or short-term policies under a different heading—that of the social fund—are possible. As well as the questionable benefit of the social fund, over-reliance on a palliative or short-term solution to a severe problem, this circumstance has considerable consequences for the staff and institutions engaged in the process.

The most effective European educational policy is that carried out by means of the social fund, over which there is no education control at EEC or member state policy levels. The ironic consequence is the reinforcement of dual systems of education and training, rather than the unity to which the Community officially aspires, and it is the newly developed industrial training system which is receiving the resources.

The authors are lecturers at the Anglian Regional Management Centre, North East London Polytechnic. Ian Waitt is editor of, and Lyn Gray a major contributor to, College Administration, a handbook to be published by Nafhe in early June.

Special attention is given to encouraging training programmes for young handicapped men and women, involving closer links between employers and education authorities.

A chance to make sense from chaos

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The guiding principle is mutual or really overlapping interests. This is not seen as in conflict with compassion but as a necessary reinforcement. Neither is there any illusion that mutual interests are so total that hard bargaining can be avoided or so costless that there will not be real problems of devising methods and mobilizing backers. The commissioners remembered the real world of classes and companies, passions and human beings from which they had came and this gives their report a sense of immediacy and realism.

The report must first seize the attention of decision takers—to have any real impact. To date it has done than. It must convince them that north-south relations are of crucial importance to north and south. It has a chance to do that. After all by his own sessions it converted Katharina Graham of the *Washington Post* and Edward Heath to that view and Layachi Yaker of Algeria to seeing that the north had real problems which had to be among the issues on the agenda if any "new global round of negotiations" were to succeed.

There must be speedy action as time is on the side of the new international economic disorder net of those who would control it. As the World Council of Churches advisory group on economic matters put it: "Halting and beginning the reversal of these trends may seem minor when compared to the full structural changes required. Yet it is the necessary first step toward them". Thus the commission calls for a global economic summit to agree on an emergency programme to be negotiated and acted on.

What action is proposed? The areas cited include first massive resource transfers to allow the north to escape recession by export led growth and the south to avoid a collapse of output. Second is an international energy strategy to secure adequate supplies at predictable prices and insure the real value of the financial assets held in the north by OPEC members. Third is a global food strategy to forestall risks in malnutrition and starvation and ensure the elimination of hunger and also to end the food price explosion in the north. Fourth is better access for south processed goods (e.g. blended, packed tea) and manufactured goods (e.g. consumer durables) to north markets so they can continue to buy north exports and to service their loans from north banks.

Fifth is the international monetary system where a new reserve asset, less unstable than the dollar and gold have proven themselves to be, is needed and the price of getting a genuine international central bank to have broader effective participation in decisions and more concern with sustaining development as well as with managing deficits.

These proposals are articulated on the basis of overlapping interests. They do address themselves to the real dangers: collapse of north exports to the south; massive bank failures triggered by south defaults; energy starvation everywhere; literal starvation in the south; escalating trade wars. All at levels unseen since the 1930s. Whether they will be accepted is unclear. Negotiating processes, vested interests, mutual suspicions, the present dynamic of disorder and disintegration all suggest not. But *Programme For Survival* may be the last chance to avert a disorder so bad as, that of the decades ago. It is the only "some plan" on offer which has a chance of being adopted, acted on and producing a viable new, international economic order. The alternative today is chaos.

Whatever else they may be trying about Willy Brandt and the commission are correct on two critical issues.

First, the search for solutions is not an act of benevolence but a condition of survival. We believe it is dramatically urgent today to start taking concrete steps.

Second, international solidarity must start from strong national institutions in each nation and from international co-operation.

The author is a professorial fellow of the Institute for Development Studies at the University of Sussex.

Peter Wason and Wendy Stainton Rogers describe the difficulties and challenges of writing for the OU

The art of course angling

In this article we want to talk about the experience of writing for the Open University. We feel that the particular constraints and opportunities implicit within such an exercise are both intrinsically interesting and offer potential guidelines for expository writing in general.

The original concept of "The University of the Air" may suggest that television and radio programmes form the basis of Open University teaching. This impression is erroneous; essentially, the Open University is a correspondence university. Information is primarily conveyed to students by the written word in the form of "course units". In the conventional academic setting the text book supplements oral teaching. In the Open University, oral teaching supplements the written word.

The Open University is intended to offer educational opportunities to people who need not have any formal qualifications. So it would be fair to say that writing a course unit is facing an audience of almost unprecedented variation in ability, experience, reading and writing fluency, familiarity with "academic style", and self-confidence. Our own experience of Open University students is that the only characteristic they all share is an almost overwhelming commitment and determination to succeed. They are also extremely vocal—loud in their praise where they consider it due, unabashed in their criticism if they feel that at any level somebody is trying to pull the wool over their eyes. To this group of students we attempt to get over *in writing*, the knowledge which an undergraduate must acquire about his chosen discipline.

When the Open University was *first* set up one proposal was that it should rely heavily on the contributions of outside experts and enthusiasts to write the core of course material. In fact, the larger proportion of course units today are written by full-time Open University staff. Nevertheless, units written by external consultants form an important contribution to many courses.

A consultant has at his disposal a wide variety of skills and types of experience; teaching by means of lectures, seminars and tutorials; writing academic papers and books; supervising and conducting research, reporting research to meet deadlines, etc. All of these tend to be used in the usual professional setting, as clearly defined and separate activities. Writing a course unit demands that they should be amalgamated into a single "written tutorial". As a guide to course unit writing puts it: "As you are probably used to teaching don a tutorial list while preparing your unit and try thinking of the seven to eight hours that students will spend working on it as a day spent in your company."

Thus a consultant is faced with a novel task. Fortunately, the procedures evolved for doing it are designed not only to ease the burden, but can make it actually enjoyable.

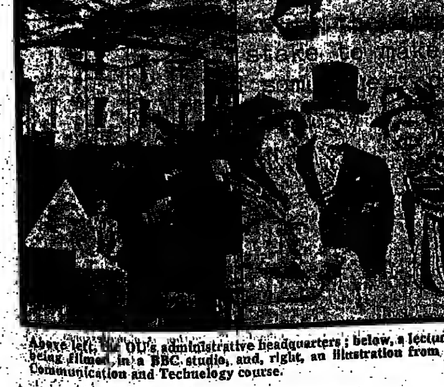
It is a cardinal principle of the Open University that the form and content of any academic course are achieved through close collaboration of a course team. Units, although they are usually the responsibility of an individual author, are examined and commented upon, argued over and eventually consolidated by as many as 20 or 30 people. An unusual feature of the Open University is its formalized but flexible system of phased collective criticism which is brought to bear upon the text. While the precise details of this process differ from course to course, and indeed for different units within a course, the principle is clearly established. Table 1 illustrates the typical procedures involved.

The standard model of scientific debate and progress leans heavily upon the Hegelian model of thesis-antithesis-synthesis. In other words, progress is assumed to take place through argument and counter-argument, finally culminating in agreement, albeit spurious agreement on occasions. The Open University seeks to work in a different way. Criticism is intended to be therapeutic; to enable individual authors to draw out and examine the consequences of an argument in the simplest and most direct possible terms. It presents the author with many alternative points of view, and hence forces him to "decenter" from a stand and from implications to which he may have become deeply committed.

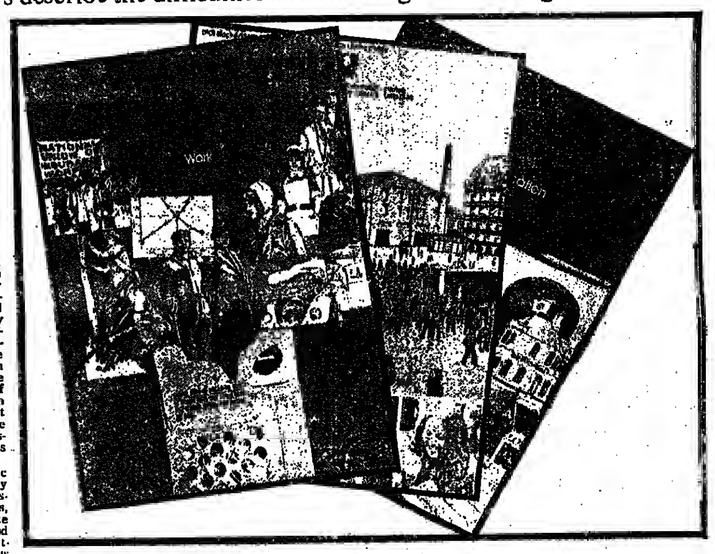
Constructive criticism should avoid as far as possible any threat to an individual's self-esteem. Since all the people involved in the process are working together to produce a document which will reflect upon their corporate competence, people may feel freer to make suggestions stemming from their genuine reactions. They are unlikely to state an argument for the sake of "scaring points off the experts", but are likely to ask for an argument to be reconstructed because they find it difficult to understand.

The nature of the Open University style of collaboration can probably be appreciated best by citing actual comments which were made in the production of PCW's unit on the psychology of reasoning for a course in Cognitive Psychology. PCW produced an elaborate and detailed first draft (see Table 1) which produced the following comment: "Beautiful . . . but would any of our students *understand it?*" In other words, it was very much in the style of a monograph which might have been offered for publication to a learned journal.

What was really interesting about this was that PCW had already been given written information about the principles of writing course units and had felt he already understood them before he had started.



Above left, the OU's administrative headquarters; below, a lecture being filmed in a BBC studio, and, right, an illustration from a Communication and Technology course.



He had simply found himself unable to execute them, or even recognize the lapse until criticisms were made at a concrete level. "I think there is only one real problem; the students might have difficulty picking up a unifying, motivating thread of argument and following it through the unit. Now this is not an organizational problem. For I think the overall organization is just about right. And the writing itself is excellent. What's probably needed is a bit more leading-the-student-by-the-hand (condescension, if you like) . . . I think the key issue is that we are trying to turn the students into cognitive psychologists (or exposed them to them about cognitive psychology). This means that you must somehow make the student feel as if he is in your shoes. This means leading the student step by step through each phase of what your own thinking was (ideally) like. Then, at each step along the way, the student can be gently prodded (by prompting hints and probing questions) into discovering for himself the analyses, experiments and explanations you arrived at. In such a situation the student really would be in your shoes. This is very difficult to achieve, of course, but I actually think that you can do it—mainly because your unit has a lot of that flavour already."

This commentary was followed by four pages of detailed suggestions about the text, proposing ways in which the objectives could be achieved. One more example of the criticism PCW received on his first draft should give an idea of the cogency and helpfulness of the comments: "In a *written* tutorial of this kind you have to try to visualise the puzzled frown or non-comprehending question which would lead you to backtrack and try again to put over your ideas . . . I also think it adds a lot to the interest, and therefore understanding of our students if they realize that psychological research is carried out by human beings who don't always follow the rational planning of journal articles . . . so when they have an opportunity to read a psychologist's account of his own research, it is rather off-putting to see ". . . the experiment was conceived . . . ; the experimenter decided that . . . ; or 'Watson did this or that'."

It was only when PCW read these remarks that it became clear what was wrong. Most academic writing works to set the reader apart from the writer. In order to give the accepted impression of strict objectivity, a writer must detach himself from his subject-matter and his reader. But in the Open University conceptual objectivity must be mediated by effective written communication. This means that although a course unit can and should be, academically demanding, it must not possess the daunting characteristics of much academic literature. Instead it should create a bridge between an intellectual discipline and everyday experience; it should anticipate the difficulties involved in intellectual exposition; it should actively involve the reader in following the argument. Above all, it should be devoid of jargon, while at the same time creating enthusiasm for the subject under discussion.

The first draft written by PCW was something which might have been appropriate for a learned journal, but it was, as the critics pointed out, totally unsuited to the Open University student. One major defect, hinted at by the first critic, was that the particular reasoning problem on which PCW had done most research was discussed immediately after it had first been presented. And just as most of the subjects in the experiments failed to comprehend the solution, so too would the reader. And yet, when writing about it, PCW forgot his own these and expected Open University students to understand. This was discussed at length during the course team meeting.

Finally the team chairman and PCW together evolved the idea of not giving the solution to the problem immediately but holding the reader in suspense by building bridges towards the solution. Two related and more comprehensible problems, which subjects had been able to understand more easily, were inserted between the first presentation of the problem and its final solution. This suggested reconstruction acted as a catalyst: it enabled the author to write a much simpler, more relaxed and more effective second draft. Gone were phrases like ". . . the negation of the consequent of the task. is associated relatively more frequently with a falsifying thought process than is the unnegated consequent . . ." But the most liberating event was a casual remark made by the course team chairman.

The first draft started with the discouraging words: "At least one contemporary psychologist maintains that the study of thinking can contribute little to the development of scientific psychology. I believe there is still relatively little to say about it even after 100 years of psychological research."

Instead she suggested as a first sentence: "I am interested in thinking because . . ." The result was cathartic in that it enabled the author to recover the original excitement of his research, and inspired him to rewriting the second draft that same evening.

What lessons about writing in general can we derive from this system of collective criticism? Fundamentally, we can appreciate that the most effective criticism is really collaborative, and not the usual intellectual sparring match academics indulge in publicly. Its advantages are that it allows us to "decenter" from a possibly entrenched standpoint, and alter our work both in its overall conception and in its smallest details. More specifically, the image of the Open University student, towards whom attention is constantly directed, helps to develop a sense of audience which is lacking in so much writing.

It is the common complaint of the PhD student that he does not know for whom his thesis is intended. However, perhaps more interesting and to some extent less self evident, is the finding that PCW had actually to *write* the "wrong" version before he could write the "right" one. It supports the notion that writing is a skill which cannot be done properly according to a priori verbal prescriptions. In research, the hypothesis often has many individuals find writing intolerable because they try to do two incompatible things: (a) at the same time: (b) say it what they want to say, and (b) say it in an acceptable way. The process of successful drafting in itself helps to alleviate this problem for the lone writer. Incorporated as a standardised procedure by the Open University, it seems to pay even greater dividends.

As many fluent writers acknowledge, clear writing does not come easily. The failure to recognize this may act as a stumbling block to intellectual progress. "In our experience 10 per cent of the articles submitted to the Quarterly Journal of Experimental Psychology are so unintelligible that it is not possible to decide what exactly had been carried out."

Despite the fact that most academics have spent at least three undergraduate years practising the skill of putting their ideas into writing, and supposedly being trained so, the difficulties remain notorious. We accept the necessity and usefulness of the format of the scientific paper as the appropriate vehicle for reporting research. Unfortunately, writing such papers often has the effect of degrading ideas we once found illuminating into something which does not do justice to their inception. But it can be a taxing matter, both for the reader and for the writer to have to "rediscover" experience in the interests of a standardised product.

We have written this paper because we believe that these principles have much wider application than the limited setting for which they were devised. Having been written course units for the Open University, we feel that the kind of collective criticism and collaboration used there can be exploited favourably in writing other kinds of material. We believe that these processes genuinely yield a better prose for many purposes—more readable, and more stimulating.

Peter Wason is a reader in psycholinguistics at University College, London, and Wendy Stainton Rogers is a lecturer in the Open University.

BOOKS

The story of a late Victorian woman

Olive Schreiner: a biography
by Ruth First and Ann Scott
André Deutsch, £6.95
ISBN 0 233 97152 1

by Molly Mahood

The troubles of Olive Emilie Albertina Schreiner began at the font, where she was named after three dead brothers. All her life she was to strive to be "virile"—her own obsessionally favourite word; all her life she was repeatedly to recoil in guilt or weariness from this struggle, seeking through invalidism and solitude the condition of Oliver, Emile and Albert. The rhythm of her life is clearly heard in *The Story of an African Farm*: Lyndall's Napoleonic plan of conquest aims to make both the Stranger and Gregory serve her longing for maternity, the one by fathering her child, the other by making it legitimate; but the child dies and Lyndall herself retreats into doubtful regrets not of her sexual freedom but, it would seem, of her ruthlessness, her lack of the compassion represented in Waldo.

The novelist firmly repulsed her publisher's suggestion that she should introduce a secret wedding into the story to make an honest woman of Lyndall. And the reviewers' large-hearted reception in 1883 of this astonishing first book showed her to have been right. She was welcomed, thanks to this courage of her convictions, into the avant-garde circle of socialists and "sex-researchers" which included Eleanor Marx, Edward Carpenter, Havelok Ellis, and Karl Pearson. In their new biography of Olive Schreiner, Ruth First and Ann Scott devote an outstandingly interesting chapter to her relationships with these people. They are prepared to discuss the Fellowship of the New Life, and the Men and Women's Club with a good-mannered seriousness that this sub-culture, for all its crankiness, merits in historical terms; and they offer a delicately perceptive analysis of Olive Schreiner's attempts at a kind of marriage-than friendship with Ellis and, later, Pearson. Ellis's observation: "She feels she has something of a man in her nature" implies, they realize, much more than her liking for financial independence and intellectual pursuits:

> In fact there was another part of the "man" within her, and this a seemingly more dangerous one: the part which did indeed feel powerful, assert its individuality and its right to experience.

She was compensated for the disadvantages, as she saw them, of being a woman, by a display of strength which she thought of as "virile" according to the sex-differentiations of the time but which in fact was all Blake imitated in the phrase "female denomination".

This emotionally charged masterfulness made her, as the women in the circle appear to have recognized, a dangerous woman in the old-fashioned sense. And when, in her late thirties, she married S. C. Cronwright, Olive Schreiner behaved much as the mating female mantis. Not content with keeping her own name, she made him take hers. After three months of married life on the farm which was Cronwright's first love, her sexuality had worsened so much that she was unable to write—no doubt ostrich feathers can be allergenic—so that she fled to Kimberley in the hope of finishing her "two big novels". Cronwright sold up his interest in the farm and followed her. Neither novel was ever finished.

No wonder that Cronwright's *Life of Olive Schreiner* simmers with suppressed resentment, or that he should have got his own back by presenting his wife as a child-like zealot, dependent on his protective common sense. The portrayal was basically neither difficult nor dishonest, thanks to the syndrome by which the novelist, like her creature Lyndall, swung away from a power-craving self-assertion into attacks of self-punishing illness which rendered her helplessly dependent. Havelock Ellis, in the early days of their friendship, discovered in his reading that a counselor could be made between an asocial life, "an exalted and unhealthy ambition", precocious creativity, and asthma; and Olive Schreiner seems to have accepted that her lifelong illness was of psychosomatic origins: "Oh, it isn't my chest, it isn't my legs, it is me, myself. Where shall I go? What shall I do?"

The order of the questions is characteristic. Olive Schreiner's first instinct was always to bolt. She proved a career, but as a probationer nurse she lasted only a few days in two hospitals. Empowered, as a novelist, to observe the manners of her environment with accuracy and zest, she escaped from her own gifts by writing tedious allegories. Her partings from her husband ended in the virtual estrangement suggested by an acrimonious exchange of letters used here for the first time. Even the sad toll of miscarriages can be seen as part of her will to fail. She needed to keep still; not very difficult, one might think for a white woman in Victorian South Africa. But Olive Schreiner was never still for long, and so a sense of failure in motherhood—the death of her infant daughter was a very real, indeed an appalling disaster—was added to her sense of failure as worker, writer and wife.

As if to underline her fear that existence was "a striving, and a striving, and an ending in nothing", Olive Schreiner's political life was mainly the championship of lost causes. She defended Afrikaner pasteralism while the mineshafts of a new order were being sunk into the Rand. She argued passionately that the conjectural women's vote should be for blacks as well as whites, while all the while, in Rosa Luxemburg's words, "One million white exploiters . . . sealed their touching fraternal alliance within the Union with the civil and political disenfranchisement of five million coloured voters". She believed women both could and would stop the First World War, while found her bellicose leaflets were busy distributing white feathers. Defeated from every quarter, she lavished pity on herself in her letters, to an extent which makes Den Jacobson say that "at times one begins to doubt her sanity, though not the extent of her sufferings".

A case, one might think, for the psychoanalyst; and my reference to Olive Schreiner's emotional burden was inserted here for all the familial pressures which could be held to have shaped a personality that oscillated painfully between an impossibly "masculine" mastery (in lieu of a possible feminine fulfilment) and the instinct to let go, to threw away the coke she could not both eat and have. There is however another way of looking at Olive Schreiner's unhappiness, and that is to view her as the victim of a particular historical predicament. That is the approach of Ruth First and Ann Scott.

It is a great mercy that the mass of fresh biographical material about Olive Schreiner which has accumulated in recent years should have had its first sifting at the hands of two trained and scrupulous historians. Once his own biography had been published, Cronwright believed he had destroyed, or arranged for the destruction of, everything that might throw further light on his wife's character, and he wrote to Ellis: "You and I could set the Thames on fire, if we would or *could*." This letter, together with much else that has escaped the incinerator, now lies in the great literary treasure-chest of the Humanities Research Centre at Austin.

The sexual revolution of the 1960s has made it unlikely that any disclosures from this collection or other caches in South Africa and English libraries would cause the Thames to as much as scrouloo; and in any case, as Ruth First and Ann Scott observe, Olive Schreiner was one of those Victorian women who asserted a sort of sexual freedom by denying their sexuality. What a new generation of readers has called for has been, not scandalous revelations, but the presentation of Olive Schreiner as a key figure in the history of women's liberation. Already the ground was prepared by reprints from the feminist publishing houses of Women and Labour, and *The Story of an African Farm*. The cover design of this last, a log cabin (Boldem, freedom) in the middle of the Karroo, in place of the first edition's no less intrusive palm tree (Empire, missions) serves to indicate the change in readers' expectations.

Olive Schreiner about July, 1879.

So the time was ripe for a feminist interpretation of Olive Schreiner. This book views her from a broadly Marxist-feminist perspective, preserved from narrowness of focus by the nature of the collaboration: the authors are of different generations and nationalities and have differing interests, these of Ruth First being mainly political and those of Ann Scott being in psychology and the history of medicine. Where they concur is in seeing their subject as historically conditioned by the feminine predicament, the woman's need to fulfil herself simultaneously in work and in family life.

Even those readers (I am one) who are impatient of the feminist tendency to segregate a woman's tension which is built in to the human lot, have to concede that in the decades leading up to the First World War the predicament was particularly painful for the middle-class woman. The growth of technology had by then completed the transformation of the active *housfrau* of Edward the Confessor's times into the parasitic *lady* of Edward the Seventh's reign. A very few, balanced and gifted women managed all the same to achieve both kinds of fulfilment. But a woman such as Olive Schreiner, stretched beyond endurance by the dilemma, became ill and unhappy "as an expression of the split between her sense of her own needs and the reality of what was possible in the culture in which she lived". Thus the climate of the age encouraged the growth of the hysterical personality, the late-Victorian combination of battle axe and female martyr, who demands the full exercise of our historical understanding if we are not to dismiss her as embarrassingly grotesque.

Even so, the historical perspective is not a clearcut alternative to the psychological. The climate of the age, however adverse, could not in itself create such maladjustment; the hysterical personality, always exceptional, must have owed to individual and especially to infantile experience the creation of unreal "needs". And although the authors of *Olive Schreiner* reject as reductionist the psychoanalytical approach of Marion Friedmann, they themselves have successfully balanced and modified their historical perspective by "applying a Freudian theory of the mind and its constructs to that part of [their] source material which concerns Olive's inner world". Their study of the novelist's personal relationships goes a long way towards evoking "a psychologically believable woman of the nineteenth century on the basis of the psychological language of the twentieth". If it does not get all the way, the reason is less a failure of insight than the adoption of a tone which is exceedingly cerebral and solemn. Some share of that geniality which enabled Olive Schreiner, a fortnight before her death, to keep her interlocutor in "fits of laughter" is needed if the reader is to feel the intense vitality, the dark warmth of her personality. Furthermore, if we are to know what it was like to be Olive Schreiner we surely need more reminders of what she saw, heard, smelt, felt. But the authors severely eschew the domestic density of the traditional "life and times".

Whereas the feminist angle prevails in the study of Olive Schreiner's inner life, the approach to her writings is predominantly Marxist—with less happy results. There is a simple obstacle to presenting *The Story of an African Farm* as "a statement about the violence of colonialism": its black characters are marginal. So the obstacle has to be removed by the assertion that "The European frontier society insulated itself from the indigenous society but internalized the violence it used against it: hence the violence of Bonaparte and Tom Sanders's behaviour". Applied to the book's details this produces some absurd distortions. Bonaparte's lies about his non-existent machinery, for example, are viewed as "the entrepreneurial ideology of an emergent capitalism". More certainly the awkwardness of such reflections is miles away from the complex of emotions aroused in the reader by the success, at this point in the story, of the sadistic, moneygrubbing, buoyant humbug Blenkins, one of the great monsters of nineteenth-century fiction.

Olive Schreiner's political writings come off even worse. Because her epitaphs, after the Boer War, began to resemble the Marxist view that relations between Afrikaners and Englishmen were irrelevant to the dialectic of history (Hyndman called the war a struggle between two bourgeoisies) the present essays which were posthumously published in 1923 as *Thoughts on South Africa* earn mainly negative comments for their inadequacies on race relations. Yet the study of the Afrikaner, which makes up the greater part of what Olive Schreiner thought her best book, not only fills in much of the social setting of *The Story of an African Farm* but is even today, especially when read in conjunction with more recent works such as Du Kiek's *The Parliament of Africa*, a real help to the understanding of the early white tribe to call itself African; an understanding the West is going to need, whether change comes violently or progressively to South Africa.

Another work rendered topical by recent events is *Trooper Peter Halket of Mashonaland*. Its treatment here by a massive quotation and some guarded comments is evasive, as if the writers admired its attack on Rhodes's buccaneering but did not know what to make of its religious fable. But the religious element needs scrutiny, if we are not to be left with the suspicion that Olive Schreiner has disingenuously faked a Christian viewpoint. Again, such discussion might throw light on *The Story of an African Farm* where Waldo's annual piety serves as complement to Lyndall's rebelliousness.

With *Women and Labour* the authors are understandably more at ease, and they get this impassioned plea for the right to work satisfyingly into perspective, preparing the modern reader for what might initially be considered, he felt as its shortcomings: its elitism, and its progressive, evolutionary notion of sexuality—already expladed, by Olive Schreiner but known to Freud. The pity of it is that such critical care should have been lavished on a dated piece of writing, rather than on the ever-fresh novel by which Olive Schreiner won fame.

Olive Schreiner is the most complete biography of its subject to date, and is in many ways the best. Its frank bias, however, must prevent its being the definitive life. The kind of view which is now needed to balance it would be that of a creative writer and literary critic who had experienced for himself or herself a social predicament parallel to that endured by the educated women of a hundred years ago. Such a writer could best explore the strange singularity, the gauche power which Olive Schreiner's masterpiece has in common with a number of other books by African novels—the anonymous *Turbott Wolfe* and, more recently, of Bessie Head's *Maru*.

Richard Rive might meet these demands; he has worked extensively on Olive Schreiner's life and as Ruth First and Ann Scott acknowledge, has led them to relevant source material. The impossible task for the biographer, however is for the biographer in 1642 were uniformly hostile to the drama, and her starting point is the puzzles which still surround the spectacular popular success of *A Game at Chess* in 1624. Who were the apparently powerful backers who enabled the players to stage such a savage political satire at this critical time and escape scot-free? Why did the audience which witnessed this show, wonder come from? An attempt to answer these questions involves a study of Middleton's relation to the principal figures in the parliamentary Puritan opposition to the Court party: the city magnates for whom he worked during his years of civic employments and the Puritan nobility, notably the firb and influential Third Earl of Pembroke.

We are reminded of the extent to which modern historians have shown "Puritan" to be a term of far more complex meaning than that which most of us have inherited from Dryden and the Restoration of the day were able to tolerate and even to use the theatre as a means of forwarding their own moral and social views, and the result was the development of a tradition of "opposition drama".

The extent to which Middleton's work—from his earliest verse and prose to his two tragic masterpieces—reflects these moral and social views is shown in the analysis of his career which makes up the central chapters of this book. The impression it gives of Middleton is more coherent than any previously presented. All the familiar changes—that he had no consistent point of view, that he was "anti-citizen", that he shifted to the Puritan side in 1624 for monetary considerations—are corrected or modified. The book argues, through a systematic examination of the plays, that the comedies and tragedies represent two sides of the same coin, and that Pembroke and Middleton's Puritan patrons in the city were influential in promoting *A Game at Chess*. Describing and comparing the two masterpieces, *The Changeling* and *Women Beware Women*, it suggests the naturalness of their development out of the earlier work by creating a new descriptive category, "City Tragedy"—the dramatization of the basic concerns and values of a middle-class audience as opposed to Court culture.

Summarized thus briefly, the argument may appear to be circular: Middleton's plays used to characterize the Puritan opposition and the views of the opposition party used to analyse Middleton's plays; but this is not the impression which a reading of this study creates. Basic to the argument is the description of the main characters of the anti-Court party, such as the Lord Mayor Sir Thomas Myddleton and Shakespeare's patron Pembroke (concerning whom there is a long and interesting "speculation"). Once the social setting of Middleteo's plays has been established, it is possible to trace the history of "opposition drama" on into the plays of the 1630s and into the tracts of the Levellers, after the closing of the theatres in 1642.

Margot Heinemann's study is original in conception and efficiently argued, and its conclusions—that parliamentary Puritanism of the early seventeenth century must not be seen as united in opposition to the theatre, and that it is very questionable that all the great dramatists of the period identified themselves with the traditional values of the Court party—suggest the necessity of modifying views that still prevailed. The effect of this study on one's view of Middleton is like that of seeing a familiar picture which has been cleaned.

J. W. Harper

Dr Harper is senior lecturer in English at York University.

BOOKS

Ford in performance

John Ford and the Caroline Theatre
by Dorothy M. Farr
Macmillan, £10.00
ISBN 0 333 26460 6

One of the several hooks on Ford since the war is altogether satisfactory and this modest volume does not displace them. Miss Farr does make a distinctive claim, to emphasize the physical and social conditions of Caroline theatres, especially the Phoenix, but her conclusion from this is a commonplace:

> For rewarding as are the reading and study of the plays, it is in the theatre that their variety of pattern and style, even the peculiarities which may strike a reader as tedious or irrelevant, fall into place and justify their purpose.

All of them? Nothing to the previous chapters ran support the idea of such consistency in Ford's work, carefully crafted though it was. The weakness of that conclusion, and it is a recurrent weakness, is not only that it is not true, but that it does not rest on an established structure of demonstration or argument. Evidently Miss Farr does think in terms of performance and this periodically informs her text; but largely she hedges stage matters off in a few paragraphs at the end of each chapter, largely devoted to the usual entrance doors and discleeure curtains. Perhaps some readers have doubted Ford's professionalism, but in any other respect the claims could be made as well of nearly all reputable Jacobean or Caroline dramatists.

This lack of structural ideas is disturbingly apparent throughout. Each chapter takes a play in an order which is understood to be chronological, though the problems of dating Ford's plays (especially *'Tis Pity*) are not explained. Each chapter opens with a plot summary, proceeds to a general discussion (more or less thematic) and concludes with a brief commentary on the use of more and slightly longer scenes on staging. It is, frankly, a pedestrian formula.

But at least it is open and flexible. The most satisfactory chapters are those on *'Tis Pity*, *The Broken Heart*, and *Perkin Warbeck*—by general consent Ford's best and most coherent plays. Miss Farr seeks that the handling of incest in *'Tis Pity* is unexpected: "No one who views the play to do its own work can fail to note the honesty and freshness with which the theme is treated and developed"; but her wholehearted championing of Giovanni is puzzling: "Ford is at some pains to show that the play is about a true and honest love, not about a perversion." To support that claim she develops the interesting idea that all blame attaches to the Friar who "is conceived and deliberately presented as a destroyer of the human spirit". The distribution of defence and blame seems to me much sharper than the play sustains; and the habit of knowing what was in Ford's mind ("conceived and deliberately presented") is unfortunately persistent.

The Broken Heart is taken to be a conscious adaptation of classical material, which is plausible, but an attempt to parallel the plot summary with *The Agamemnon* weakens rather than strengthens the case. It is not clear how, in general, she views Ford's copious borrowings from his predecessors: in her first chapter she suggests that the Caroline dramatists' "habit of referring to and quoting from other plays in the repertoire suggests that they were catering for habitués", but Ford's practice almost suggests the opposite, that he could use well-known but old plays without having to rocked with instant recognition. Later in the book, she refers to them as though she might agree, but never directly discusses the point again.

It is difficult to write about Ford without making him sound rather boring and second-rate, yet it is also impossible to read or see his plays without being at least sometimes surprised and impressed. Miss Farr faces this honestly, though her explanations are fragmentary: Caroline psychology is one, and the other is a rather confusing trade between acknowledgment and denial of conservatism, with a hint that he anticipated Dryden (for some reason, she rejects affinities with Corneille).

This is, as I said, a modest book, and it is difficult to be fair. Unfortunately it lacks two vital qualities: no argument is sustained to reach a prepared and significant conclusion, nor do Miss Farr's words reveal fresh and stimulating perceptions. We are left with a humbler category of usefulness: students new to Ford might be helped to sort out their own ideas, but they will not be stimulated to any not originally their own.

Nicholas Brooke

Nicholas Brooke is professor of English at the University of East Anglia.

Dramatist of the opposition

Puritanism and Theatre: Thomas Middleton and opposition drama under the early Stuarts
by Margot Heinemann
Cambridge University Press, £12.50
ISBN 0 521 22602 3

The enigmatic figure of Thomas Middleton continues to fascinate modern scholars. Already this year one evidence and arguments have been offered for adding to the Middleton canon, and there is a study appears which re-examines the whole of the dramatist's career and attempts to place it in its social and political context. If Margot Heinemann's conclusions are accepted, they will modify the conventional view of Jacobean theatrical history in important respects.

She re-examines the idea that the parliamentary Puritans who closed the theatres in 1642 were uniformly hostile to the drama, and her starting point is the puzzles which still surround the spectacular popular success of *A Game at Chess* in 1624. Who were the apparently powerful backers who enabled the players to stage such a savage political satire at this critical time and escape scot-free? Why did the audience which witnessed this show, wonder come from? An attempt to answer these questions involves a study of Middleton's relation to the principal figures in the parliamentary Puritan opposition to the Court party: the city magnates for whom he worked during his years of civic employments and the Puritan nobility, notably the firb and influential Third Earl of Pembroke.

We are reminded of the extent to which modern historians have shown "Puritan" to be a term of far more complex meaning than that which most of us have inherited from Dryden and the Restoration of the day were able to tolerate and even to use the theatre as a means of forwarding their own moral and social views, and the result was the development of a tradition of "opposition drama".

The extent to which Middleton's work—from his earliest verse and prose to his two tragic masterpieces—reflects these moral and social views is shown in the analysis of his career which makes up the central chapters of this book. The impression it gives of Middleton is more coherent than any previously presented. All the familiar changes—that he had no consistent point of view, that he was "anti-citizen", that he shifted to the Puritan side in 1624 for monetary considerations—are corrected or modified. The book argues, through a systematic examination of the plays, that the comedies and tragedies represent two sides of the same coin, and that Pembroke and Middleton's Puritan patrons in the city were influential in promoting *A Game at Chess*. Describing and comparing the two masterpieces, *The Changeling* and *Women Beware Women*, it suggests the naturalness of their development out of the earlier work by creating a new descriptive category, "City Tragedy"—the dramatization of the basic concerns and values of a middle-class audience

The oedipal drive to write

The Literary Freud: mechanisms of defence and the poetic will
edited by Joseph H. Smith
Yale University Press, £17.30
ISBN 0 300 02405 3

Although Freud is mentioned and even discussed many times in these essays, their real hero is Jacques Lacan and the school of French structuralist psychiatry. Freud's authority is of course invoked, but his principal ideas are only marginally present. Instead the authors limit themselves largely to a single text, *Beyond the Pleasure Principle*, his most speculative and ravisinnist work. Its key notions of repetition, compulsion and death wish are deployed in a difficult conceptual framework situated somewhere between analogy and homology; the chief aim is to account for the complex ways young writers come to terms with the achievements of great precursors.

Readers familiar with the work of Harold Bloom, who contributes the eponymous study, will recognise a development in his theories about literary influence and the "oedipal anxieties" supposedly experienced by later generations of authors. He and Lacan are the source for most of the general propositions underpinning the particular discussions in this collection. Lacan especially seems unusually magnetic because his innovations in psychoanalytic theory derive ultimately from Saussure, Jakobson and other structural linguists.

He believes that the unconscious "is structured like a language", and that the transactions between analyst and analysed must first pass "through the defile of the signifier", that is, language conceived semiotically, open the way for critics interested both in the nature of words and the creative mysteries of the unconscious. Moreover, he shows that Freud's concepts of condensation and displacement can be viewed as varieties of metonymy and metaphor. These rhetorical figures are then returned to the literary critical realm charged with fresh possibilities.

Bloom, on the other hand, is more interested in discovering confirmation for his own ideas in Freud's work, though he does once venture rashly into psychoanalytic theory. He finds in Beyond *the Pleasure Principle* support for his contention, as a leading deconstructionist, that all language is trope, that is, figurative, claiming that "Literal meaning, by a metaleptic leap, is therefore death, while figurative meaning is Eros". His point of entry here is the unproven claim that "the poetic will . . . is just as mythological an entity, no more and no less, as libido or the death-drive". Mythological is not meant as a disqualification. Poets are "driven" to write because they yearn for immortality. This is why their language is inelectably figurative; the literalism of death is thereby overcome.

Freud had argued in *Beyond the Pleasure Principle* that the compulsion to repeat was a manifestation of the death instinct. This happens to tie in neatly with Bloom's "oedipal" view of literary influence, which he now extends to suggest that all language is a mechanism of psychic defence. Drive and defence "contaminate" each other. Finally he arrives at this dubious assertion, which he offers "as an amateur speculator", that defence is "the most fundamental concept of psychoanalysis".

The argument strikes me as strained in the extreme, and were it not for the remarkable ascendancy Bloom has achieved over his colleagues, could be dismissed as mere psycho-metaphysics. What it unfortunately unleashes is a torrent of speculation about the nature of the "poetic will" and "defence" which, because it is not empirically checked, ultimately leads nowhere. Susan Hawk Brisman and Leslie Brisman, for instance, in an essay which pushes the critic/analyst analogy much too far, proclaim the poetic will to be a desire for recognition. For Morris Dickstein ("Blake's Reading of Freud"), the thing involves "some will to mastery"—a Nietzschean touch quite consistent here. Shoshana Felman, in an interesting evaluation of Lacan's essay on Poe, claims alternatively that poetry is both "the art of concealment", and "the effect of a deadly struggle between consciousness and the unconscious". On the other hand, there is a nexus between creative writing and sexual desire, according to Margaret W. Ferguson ("Freud and Defences of Poetry"). Geoffrey Hartman, however, surmises that poetry is "the working through . . . of inner voices", and proves it by discussing a minor poem of Wordsworth's.

The significance of this collection is that it raises the right issues, and tries to take the measure, for criticism, of recent advances in psychoanalytic theory. If it fails it is because most of the contributors have unwisely abandoned the correctives of the historic and the concrete. There are two exceptions to this: Marshall Edelson, a psychiatrist, who identifies some real problems in linking criticism and Freudianism; and William Kerrigan who, in a finely detailed discussion of the nature of Renaissance originality, implicitly demolishes Bloom's speculations about the "anxiety of influence." But no one even bats an eye.

The explanation may be that most of the contributors are idealists, in the philosophic sense, and are therefore immune to the pull of history and reality. This may also be why they display such culpable ignorance of some of the theoretical thinking about Freud and his followers. Althusser's sharp assessment of Lacan is plainly relevant, but undiscussed. And Reich's superb analysis of *Beyond the Pleasure Principle* which lies at the fundamental evasion by Freud of the political implications of his own discoveries about sexual repression, deserves to be at least confronted by a group of critics so dependent on that single text.

Michael Egan

Michael Egan is associate professor of English at the University of Massachusetts and visiting senior lecturer in humanities at Thames Polytechnic.

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BOOKS

Such stuff as dreams are made of

The Eighth Day of Creation: the makers of the revolution in biology
by Horace Freeland Judson
Jonathan Cape, £7.95
ISBN 0 224 01722 5

It was the psychologist, Ernest Jones, who asserted that our school psyche had in its time suffered three grievous blows, the first two of which were delivered by Galileo and Darwin. (The third smithing was wielded, needless to say, by Freud.) It may be doubted whether the damage to man's self-esteem was all that serious, but what Galileo and Darwin did destroy was a sizeable part of his cherished store of primeval mysteries. There followed the physicists of the 1920s and 1930s with their revelations about the nature of matter, and then in 1953 Watson and Crick with the structure of DNA—the gene itself, the stuff of immortality, made manifest. Within a few years the mechanism of heredity was being laid bare down to its very nuts, bolts, springs and ratchets.

It is not surprising then that a certain intoxication took possession of some of the practitioners of the new discipline; Monod, for example, in *Le Hasard et la Necessité* made molecular biology the basis of a new ideology, and it was perhaps such excesses, as well as the impression that an alien and slightly vulgar exuberance had entered science—reduced it, as he said, to a spectator sport—that provoked the jeremiads of Chargaff. All this is recounted in *The Eighth Day of Creation*, and those who learned their science from Jim Watson's *The Double Helix* will at once recognize the terrain and encounter many old friends.

Molecular biology in Judson's chronicle begins with Avery and his transforming principle and continues to the discovery of the DNA structure. This makes up the first and most compelling section of the book, and is the part first published in the *New Yorker*. The second section introduces us to the "central dogma" (Crick's theorem that information flows from DNA to RNA to protein), molecular genetics and the operon, the solving of the genetic code, the discovery of the messenger and the nature of protein synthesis.

The final part, which deals mainly with protein structure, and winds up with a generous dash of allosterism, brings in the dramatis personae—the great visionaries of molecular structure, Bragg and Bernal, and their disciples, Dorothy Crowfoot Hodgkin, Kendrew and especially Perutz, on whose awesome achievement Judson expatiates with a good deal of perception. It could undoubtedly be argued that this is not an altogether balanced view of molecular biology, however defined. The reticent, much admired figure of Sanger, for example, emerges only occasionally from the shadows, yet he has no less than three times at critical junctures forged the instruments needed to clear the way forward. Judson does not recall that only a matter of months before Sanger published the first protein sequence, that of insulin, one of the mandarins of biochemistry averred that the very concept of a unique sequence for a protein was absurd. (There is a parallel here with Ostwald, who, some years into the twentieth century, stoutly denied the existence of atoms.) Indeed Staudinger's struggle to convince the scientific world that macromolecules were a chemical reality must have been within the recollection of biochemists of the period.

No matter; Judson has written a captivating and worthy account of a remarkable intellectual adventure, and one that will give pleasure and instruction to scientists and non-scientists alike. He has made a brave and successful effort to assimilate the essential technicalities of the subject and to present them to the reader without the sleight of hand that marks so much of today's science journalism. Only rarely does the tirasome breathlessness, that is so often inseparable from the genre, intrude: a milligram of RNA is "less than a hundredthousandth of an ounce", for example. (One senses the author darting his eyebrows anyiwer in the manner of Groucho Marx; the expected reaction presumably is a low whistle.) Judson has, I think, brought off a triumph of what in France would be described as *haute vulgarisation*. His book is admirably produced, with an excellent collection of photographs, and is a remarkable bargain at the price.

The evolution of molecular biology emerges here as a phenomenon probably unparalleled in the history of science, for it was brought about by fertilization from other disciplines, particularly physics and physical chemistry: biochemists on the whole were not equipped to confront the problems. The triumphs of the previous decade or two were, most strikingly, the resolution of the metabolic pathways of living cells. The attention was paid to the macromolecules, which caused these reactions to occur. Unexplained effects were vaguely attributed to the action of enzymes. Judson has a revealing story, in which A. L. Dounce—whose reflections a decade before the main events of this book, prefigured the "central dogma" and the need for a genetic code—related that his thinking had been directed by a question put to him during his PhD examination.

The examiner was J. B. Sumner, the first man to crystallize an enzyme, to almost universal disbelief and indeed derision. "He inquired", Dounce said, "how I thought proteins might be synthesized. I gave what seemed the obvious answer, namely that enzymes must be responsible. Professor Sumner then asked me the chemical nature of enzymes, and when I answered that enzymes were proteins or contained proteins as essential components, he asked whether these enzyme proteins were synthesized by other enzymes and so on ad *infinitum*." The dilemma remained in my mind, causing me to look for possible solutions that would be acceptable from the viewpoint of logic". Dounce's clarity of vision was perhaps unique among biochemists of the time.

The transition from metabolic biochemistry to molecular biology involved a break in dynastic continuity, as well as a shift of outlook. Judson quotes Kendrew's aphorism that molecular biology was born of an encounter of information and conformation, and it was precisely the realization that information is enshrined uniquely in large molecules (either in their sequence, structure, catalytic capacity or the built-in ability to undergo cooperative interactions), which gave rise to a sudden and aching need to determine sequences and three-dimensional structures.

Many of the early efforts were characterized by haste, improvization and at times a fairly comprehensive ignorance of biochemistry, as Watson's account in *The Double Helix* made clear. A new alignment of molecular biologists, soon to stand revealed as a kind of commonest-establishment, quickly emerged, however. It was not noted for its benign tolerance of outsiders, nor was it conspicuously prey to the agonies of self-doubt. These traits, as much as their obvious success, were what the legitimate practitioners of biochemistry found so hard to forgive their new colleagues: molecular biology was indeed, as Chargoff observed, biochemistry practised without a licence.

What marked the early victories of molecular biology was the style, no less than the substance. The boldness and precision with which the critical questions were identified still communicate themselves powerfully through the pages of the publications. J. D. Watson, Crick, Wilkins and Pauling had not been an band, the nature of the game would undoubtedly have been uncovered by other (one should perhaps not say lesser) men. It would have been established by laborious chemical studies that DNA consists of two strands, which separate when the helix is melted, and that the bases on opposite strands form hydrogen-bonded pairs. The double helix would ultimately have been discovered, but by then the heart of this day the fact of belligerence has no important functional implications.

The manner in which the discovery was presented to the scientific world was paramount, as without Watson and Crick's celebrated paper of 1953 in *Nature* the great goldrush of the 1960s would never have developed. The impact of the dominant personalities, who imposed their stamp on the subject, is what Judson's book most vividly conveys. The figure who beside molecular biology for a quarter of a century and still casts the longest shadow is Crick. Like Rutherford, he was ever on the crest of the wave, and like him also, he might well have said that it was a wave of his own making. His personality pervades the story; as the Russian Sydney Smith said of a fellow contemporary: "Science is his forte and omniscience his foible".

Judson's chronicle stops short of the second phase of promise which began in the 1970s with the discovery of reverse transcriptase and is now in full spate with the frenzied pursuit of the benefits of gene manipulation, of which financial gain is not the least. The subject has emerged from its age of innocence. It will soon be hard to make its impact on society, and there must already be many ageing academics, who look back wistfully at that dawn in which it was bliss to be alive, and any heaven to be young and know how to plate out a mutant or two of *Escherichia coli* for a chemical experiment.

Walter Gratzer

Walter Gratzer is in the MRC Cell Biophysics Unit, Department of Biophysics, King's College, London.

Chemical revolution in France

Origins and Early Development of the Heavy Chemical Industry in France
by John Graham Smith
Oxford University Press, £36.00
ISBN 0 19 858136 X

We still use the phrase "Industrial Revolution", but it brings to mind quite different ideas from those it aroused a generation ago. What produced the modern, technology dominated world? It used to be taught that first came the mechanization of the textile industry with its effects on the relationship between the labourer and his workbench and workplace; then, the perfection of means of smelting iron with coke; and the development of steam power. This latter did not simply replace human and animal effort but transcended it by making possible activities like deep level chalonga which would have been beyond any practical multiplication of animal power. Water power, of course, had been and remained important but steam offered the grand revolutionary image.

Modern studies have, however, been changing our view of what changed the world. The Clows' persuasive book, *The Chemical Revolution* (Batchworth, 1952) pioneered the thesis that there was associated with many manufacturing processes a dominant factor of chemical technology, which was either a necessary condition of operating the process, or which rendered it speedy and profitable. Moreover the rapidly growing confidence of industrial chemists in their ability to devise new styles of equipment which were not mere enlargements of laboratory apparatus, played a part in the emergence of quite new industrial resources.

We now see the industries based on chemical transformation playing as large a part in the revolutionary movement as any of the heroic mechanical or civil engineering advances which used to give the *industrial revolution* its romantic flavour. This is the factor which unites metallurgy, ceramics, glass, textile processing, brewing and the sugar industry. The gas industry has been little studied as a social force, but it was transforming British and much of Western European urban life at the same time as, and as fast as, the railways were changing communication and commerce.

John Graham Smith's book on the chemical revolution in France is a valuable addition to the literature of an involved subject. It is painfully dull to read, but worth a dogged effort by anyone who is studying in this field or wants to teach a balanced view of the history of technology. It confines itself to three main subjects: the manufacture of sulphuric acid, chlorine bleaching, and the beginnings of the Leblanc soda industry.

It was to be some time before it could be asserted that a nation's output of sulphuric acid was an index of its economic vigour, but over the half-century from the appreciation of Lavoisier to the post-Restoration settlements, the industry grew at two levels, as is so often the case with a science-based industry even today. Smith recognizes this throughout the book, drawing attention on the one hand to improvements in technique and enlargement of scale (which he does very well), and on the other hand to the light shed on the processes by investigators of chemical science (which he does not do nearly so well).

Here is the problem, all too familiar to exponents of the history of technology. How much scientific knowledge can a writer or teacher assume in his audience? What loss of communication results from limiting oneself to describing the public face of a technological movement without illuminating it with an account of the related science of the day or with present scientific knowledge? Smith's stance is not clear. Does he think his readers know enough for him not to need to explain the chemistry of the processes in contemporary or modern terms? Or does he think his average reader does not care very much about this approach? It does seem to me that the reader would understand the difficulties facing the manufacturers and administrators of the time all the better if their chemistry is interpreted in the light of modern knowledge. One's reaction is all the more likely to be "How well they did, how resourceful they were, considering the limitations of their information".

The case is altered when we consider the social and political background to any technological enterprise. Lavoisier, Berthollet and Leblanc had each in a different way to live with political turbulence and to make private decisions about family, ambition, livelihood or survival in a country which was changing in they knew not what direction. Lavoisier served his country without inconsistency under the *Ancien Régime* and under successive revolutionary governments. Leblanc, whose process for making soda eventually made many another man's fortune, died by his own hand in a private despair at finding himself an economic misfit. How difficult it is to explain the failure of a man whose merits have been revealed by the passage of time! Leblanc's chemistry was right for the future but his character was wrong for his present.

Is a modern view of the role of the innovator valid, however, for the late eighteenth century? To take only one point, there are resemblances and differences between the promotional functions of the successive official scientific bodies in France and modern governmental enterprise boards or research and development corporations in many countries. Smith's book will provide useful material for any study of state science which recognizes that there is more to innovation than individualism and virtuous inventiveness. We often debate the contribution to the progress of science made by war. Have we paid enough attention to the contribution of acquisitiveness and greed?

Few scholars and fewer students are likely to buy this book at its present price. Let us hope its author will offer its valuable essentials again in a cheaper more assimilable form.

Frank Greenaway

Frank Greenaway is Keeper of the Department of Chemistry at the Science Museum, South Kensington, London.

Lebiane's experiments on crystallization interrupted by le commissaire de la Commune de Francisde.

Dovetailing of theory and experiment

Electronic Processes in Non-crystalline materials
by N. F. Mott and E. A. Davis
Oxford University Press, £29.00
ISBN 0 19 851288 0

This book is about a revolution and is written by two physicists who played a major role in it. The importance of the work and the justification for describing it as a revolutionary were demonstrated in 1977, by the award of a share in the Nobel prize to Sir Nevill Mott for his achievements in this field of research. The revolution was not a sudden coup *d'etat*, an overthrowing of previous ideas by an explosive insight; it was rather a development of new theoretical structures, backed (or led) by extensive experimentation, for handling an enormously wider range of circumstances than before.

Twenty years ago solid-state physics was mostly about periodic crystal lattices. The behaviour of electrons in such systems was beautifully described in terms of Bloch functions and band theory; and, of course, it still is. What happened was a growing awareness that the issues of systems, both natural and man-made, which are not perfectly crystalline (and which are interesting and perhaps also useful) far exceeds those that are; and, more importantly, the realization that the development of a real theoretical framework for treating these systems was now possible.

This involves the concept that local structures and interactions are of dominant importance and requires a coming together of chemical and physical ideas. Indeed we might, not altogether unfairly, describe the great advances which have occurred as stemming from the discovery by physicists of the chemical bond and its use in transforming the general ideas of band theory so as to describe non-crystalline materials.

The first edition of the book was published in 1971 and the very substantial developments since then have made this new edition necessary. Research activity in this area is still growing and there have already been significant new developments since the book was completed in 1977; so we may perhaps look forward to a third edition in a few years time.

This is a quite beautiful book. To write it while the subject is still under such vigorous growth requires great knowledge, perception and foresight. These qualities are abundantly manifest throughout what amounts to three books in one. The first, after a short introduction, deals with the theoretical concepts: "Theory of Electrons in a Non-crystalline Medium" (58 pages); "Phonons and Polarons" (33 pages); "The Formal Glass and the Anderson Transition" (63 pages); and "Liquid Metals and Semi-metals" (38 pages).

The second deals with applications of these concepts to experimental observations in "Non-Crystalline Semiconductors" (121 pages) and the third discusses a wide range of studies on several examples in considerable detail: "Tetrahedrally-Bonded Semiconductors-Amorphous Germanium and Silicon" (88 pages; Arsenic and other Threefold Co-ordinated materials" (34 pages); Chalcogenide and Other Glasses" (75 pages); and "Selenium, Tellurium and Their Alloys" (31 pages). There are 35 pages of references and a good index.

The writing is both clear and authoritative with just the right amount of repetition of theoretical concepts introduced into the chapters on experimental results. The numerous illustrations are mostly well chosen examples of experimental data taken from the original literature, and a special strength of the book is the excellent dovetailing of theory and experiment. Lucky is the new research student in this field who has this as his bible! The volume is produced to Oxford University Press's usual high standard, giving a book which is not only a delight to read but also essential reading for anyone working in this exciting field.

A. J. Leadbetter

A. J. Leadbetter is professor of chemistry at the University of Exeter.

BOOKS

Community chemistry

Chemistry in the Market Place
by Ben Selinger
John Murray, £4.50
ISBN 0 7195 3617 0 2

This book is based on a course on "community chemistry" first given by Ben Selinger and his colleagues in Australia in 1973 to 1975. The present updated paperback version still reflects the Australian scene, but much of it will be of direct interest to readers in the United Kingdom. It deals with the chemical constituents of a wide range of consumer goods and provides the sort of detailed information that is not readily available elsewhere. Inevitably it reflects many of the author's own interests, and is therefore a little uneven. It also comes down firmly on the side of the consumer, and in a few instances it could be argued that the manufacturer's viewpoint is not always fully stated.

In all there are fourteen chapters, many with appendices listing the properties of materials or topics for discussion; and full references are given. From time to time there are small special sections giving, in effect, case-studies or extracts from other publications. Chapter 1, on basic chemistry, would be wasted on anyone with a knowledge of elementary chemistry, and hardly provides a basis for some of the formulae given later.

"Chemistry in the Laundry" (chapter 2) seemed to be the one covering the most authority. For the first time I know and can appreciate the chemical basis of the composition of a domestic washing powder such as Omo, Rinso or Surf.

If you are interested in polyunsaturated fats in butter and margarine then chapter 3 will be of some value, but otherwise I found this chapter thin. "Chemistry in the Boudoir" (chapter 4) seemed a little unbalanced, with a longish account of the cosmetic industry and extensive lists of the protective power of sun lotions and forbidden chemicals, but little on many other cosmetics.

Chapters 6, 7 and 8 cover plastics; fibres, fabrics and flammability; and paints and glues. Chapters 9 and 10 deal with medicine to some form or another, beginning with an historical review of drug development that includes a blow-by-blow account of the Thalidomide tragedy. We make a jump to chapter 11, which starts with energy—to my mind rather a short and uneven account—and then concerns itself with the car and its accessories.

Then it is back to food, with additives and packaging; here I felt the author was more against cyclamates than recent research justifies. The material in this chapter did not always seem to be in a logical order but it was all worth having. Chapter 13 reviews the problems associated with heavy metals.

The book makes fascinating reading and is an invaluable source of data for courses for non-science students or evening classes.

G. W. A. Fowles

G. W. A. Fowles is professor of chemistry at the University of Reading.

Heterocyclic bases

Chemistry and Biochemistry of Pyrimidines, Purines and Pteridines
by Derek T. Hurst
Wiley, £14.00
ISBN 0 471 27647 2

There are several encyclopaedic tomes devoted to heterocyclic chemistry but relatively few textbooks. Most of these latter are not very good, perhaps because they generally attempt to cover too wide a field. Many publications devote too much space to compounds like pyridine, and the present author has not been able to resist the inclusion of an outline version of pyridine chemistry in his introductory section. In his preface he points out that purines, pyrimidines and pteridines deserve better coverage. He might have gone further and suggested that these are among the most important of naturally occurring compounds, as the first two at least are major components of nucleic acids. The inclusion of pteridines is perhaps understandable, as they have a chemical relationship with purines and pyrimidines. However, the amount of space devoted to them is small and belies the title.

The author has been successful in his professed aim of remedying the various deficiencies and producing a book which would not only appeal to chemistry students but also to students of pharmacy and biochemistry. The book is largely about the chemistry and biochemistry of purines and pyrimidines, but includes sections on nucleosides, nucleotides, nucleic acids and miscellaneous pharmaceuticals. Rather less than half the book is devoted to synthetic procedures and general reactions of each of the three heterocyclic bases, useful if brief accounts of their ultraviolet, infrared, mass and nuclear magnetic resonance spectroscopic properties and valuable lists of ionization constants. A similar format outlines the major syntheses of purine and pyrimidine nucleosides and nucleotides, including interesting sections on antibiotics and coenzymes.

In an expanding field it is inevitable that reviews will tend to lag behind current progress and this book is no exception. Too much attention has perhaps been paid to methods which are little used today—for example, phosphorylation with phosphoryl chloride (page 117) is normally carried out on unprotected nucleosides; and mercury salts (page 111) are not favoured, as the difficulty of removing them has led to misleading activities.

A standard account of nucleic acid structure, biosynthesis and function is followed by an interesting discussion of chemical carcinogenesis and cancer chemotherapy. A final chapter is devoted to general pharmaceutical and agricultural chemicals.

The author has produced an excellent book which should prove an invaluable guide to undergraduate and postgraduate students not least because of the excellent reference sections at the end of each chapter and the many clearly drawn formulae.

G. Shaw

G. Shaw is reader in organic chemistry at the University of Bradford.

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Biochemical aspects of plant hormones

Biochemistry and Physiology of Plant Hormones
by Thomas C. Moore
Springer, DM 49.00
ISBN 540 90401 8

Professor Moore sets out in this relatively short book to introduce advanced undergraduate students to plant hormones. The approach is strongly biochemical—as the author points out in the preface. Physiological aspects of hormone action are definitely, but intentionally, given short measure. In his view students obtain a better understanding of plant growth by learning first about biochemical aspects of hormones and then progressing to an integrated study of developmental processes.

Here I disagree with the author, partly because many students of biology, even "advanced" students, often have an inadequate background in biochemistry and rapidly lose enthusiasm if directed in this way. There is a much stronger case for introducing biochemistry students to plant hormones through a book like this, the only snag being that a basic background in botany is assumed, including plant anatomy and water relations. Because an appropriate background is so important, what is why that it was not defined more precisely, preferably with lists of suitable textbooks on botany and biochemistry.

The book starts gently with an introduction to growth and differentiation in plants which, although useful for biochemically oriented students, is probably rather elementary for advanced biology students. The hard information comes in the remaining six chapters which discuss in turn auxins, gibberellins, cytokinins, abscisic acid, ethylene and phytochrome (although, as the author says, this last is certainly not a hormone). For each hormone there is a section on its discovery, a detailed description of its chemical nature, biosynthesis, metabolism and mechanism of action, and variable space devoted to physiological effects. Some idea of the biochemical emphasis can be gained from the fact that 23 per cent of the chapter on gibberellins relates to chemical nature and biosynthesis (with structural formulae of 52 gibberellins given), making this an excellent reference source for demanding considerable knowledge of natural product chemistry for full appreciation.

The lucid style and general tone of the book are well suited to student readers, although I found the odd system of mixing up cited and uncited references at the ends of chapters unhelpful: surely separate lists of key books and papers would give a better guide to further reading. In general, a useful reference book but one that I would recommend as a course text for biology students with limited biochemical knowledge. I still prefer a more physiological approach to plant hormones.

Irene Ridge

Irene Ridge is senior lecturer in biology at the Open University.

Surprises of differential equations

Hill's Equation
by W. Magnus and S. Winkler
Dover/Constable, £1.90
ISBN 0 486 63738 7

The nineteenth-century subject of ordinary differential equations has thrown up many surprises, and more will certainly be coming in the next decade. Perhaps the common feature of these surprises is that much of what we know, and regard as general, is in fact very special information which holds for a rather narrow class of equations. In 1877 G. W. Hill found an important class of equations in studying the motion of the moon. Since then such equations have turned up in many places (stability problems according to Liapunoff in 1907, frequency modulation by Cambi in 1948 to name only two).

One strange feature of such equations is exhibited by a system in which a mass moves under a periodic restoring force which is also proportional to displacement. Increasing the magnitude of the restoring force does not continually increase the restoration of the mass to its equilibrium position: there are intervals of stability and other intervals in which the force increases instability.

The first edition of the book dates from 1966. In the past decade a lot has happened in the case where there is a finite number of instability intervals. The very functions that produce this have been shown by Lax in 1975 to occur in the construction of periodic solutions of the non-linear (partial) Korteweg-de-Vries equation.

The authors have not, unfortunately, had the opportunity to include this recent material. The present Dover edition differs from the earlier one only by the addition of a double page of introduction and 16 additional references. None the less it is still successful in its original intention of providing a "brief but thorough" orientation on Hill's equation for engineers and research mathematicians.

C. W. Kilmister

C. W. Kilmister is professor of mathematics at King's College London.

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BOOKS

Modern and radical

Radicals
by D. C. Nonhebel, J. M. Tedder and J. C. Walton
Cambridge University Press, £14.00 and £5.50
ISBN 0 521 22004 1 and 29332 4

All three authors of this addition to the Cambridge Texts in Chemistry and Biochemistry series have been actively engaged in research in the field of radical chemistry; two have contributed a more extensive monograph on the subject (*Free-Radical Reactions*, Cambridge University Press, 1974), and have subsequently written annual surveys of progress in the field for the well-known Wiley series. It is not surprising, therefore, that the present volume gives an authoritative and broad coverage of its subject, with points so copiously exemplified that I found myself wishing that there was a more complete bibliography. However, the book is written for advanced undergraduates in chemistry and biochemistry, and the limited selection of references for further reading is well chosen.

Radical chemistry has been a popular topic for texts at this level; the present one seems particularly successful in demonstrating the educational value of a subject which draws upon basic ideas of electronic structure, thermochemistry, kinetics and spectroscopy, and which, in development, is shown to underlie important processes in industrial chemistry and in biochemistry.

The past decade has witnessed major advances in our quantitative knowledge regarding unit steps in radical processes. Quantitative data and kinetic analyses abound throughout the book, and the delicate balance which frequently occurs between fast reactions involving low concentrations of catalysts or transient species and slower reactions with bulk reagents, is repeatedly emphasized; this complexity is nicely illustrated in the discussion of redox reactions mediated by transition metals—a topic highlighted in an illuminating foreword by W. A. Waters in connexion with its importance in biochemical systems.

The text is relatively free from trivial errors, and the diagrams and formulae are of the high standard which characterizes this series. Just occasionally, the concise style comes dangerously close to superficiality, and there are minor lapses which may stem from the very familiarity of the authors with their subject. Thus, having explained the first-derivative presentation of electron spin resonance spectra, chapter three includes, without comment (Fig. 3.4), the spectrum of the ethyl radical in second-derivative form. Another apparent oversight actually concerns the title of the book; until recently *Free Radicals* might have been preferred, in order to avoid confusion with the now archaic connotation of "unchangeable rooms" of organic compounds. In most recent usage, a distinction is drawn between "free" radicals and those existing as partners formed together in a "geminate pair". Although the latter are fully discussed, especially in the useful exposition of the CIDNP phenomenon, the use of "free" is never explained, despite its appearance in one chapter heading!

Such minor blemishes apart, *Radicals* forms an admirable introduction to an important topic. It can be recommended not only to advanced undergraduates, but to any scientist wishing to acquire a broad overview of modern radical chemistry.

M. J. Perkins

M. J. Perkins is professor of chemistry at Chelsea College, London.

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Coulson's classic retains its clarity

Coulson's Valence
by Roy McWeeny
Oxford University Press, £17.50 and £8.50
ISBN 0 19 855144 4 and 855 145 2

Coulson's *Valence* is a classic which has influenced the thinking of a generation of chemists. The first edition was published in 1952 and was revised nine years later, largely by the inclusion of a chapter on ligand field theory. Although the incorporation of quantum mechanical concepts into chemistry has continued unabated, the death of Charles Coulson in 1974 dashed hopes that we would be able to read his characteristically simple but penetrating accounts of them in a further edition of *Valence*. It was no small responsibility that Professor McWeeny undertook in writing a third edition of Coulson's book.

There is much that is familiar in the new edition—well remembered diagrams and Coulson's explanations, which clearly stand the test of time. There is also much that is new. Although it has only a few more pages than the second edition, a larger page size and smaller typeface lead to a book that is half as long again. Most chapters show an increase in length but the major extensions came in "Chemical Reactivity"—which, though previously a couple of pages, becomes a chapter, as, too, does "Self-consistent Field Theory". Three appendices (on "Probabilities", "Angular Momentum" and "Group Theory") are included for the first time, as are problems at the end of each chapter.

But for a book carrying the name of Coulson, contents are only part of the story; equally important is the way in which it is written. "With clarity" is my verdict. Inevitably, there are points of criticism but these are minor and perhaps personal. Thus, I found the apparently careful avoidance of the term "character table" in a detailed discussion of characters and labels associated with irreducible representations somewhat strange (appendix 3). Quite clearly in error is the statement that Xe and PtF$_4$ form Xe$^+$PtF$_6^-$ (page 373). It is inevitable that photoelectron spectroscopy should appear; however, although it is explained twice, I expect that students will discount the importance of monochromatic incident radiation because it makes sense without it rather than because it is clearly stated in the book. Figure 11.17, which illustrates various atomic arrangements of solids containing atoms of groups IV-VII, is only vaguely and cryptically referred to in the text. For these were more than affect by a clear, unambiguous—but perhaps provocative—statements as "They do not exist! They are artefacts of a particular theory".

Professor McWeeny is to be congratulated on his revision. Much more can be said, except that if that Coulson would have approved of this third edition of his book?

S. F. A. Kettle

S. F. A. Kettle is professor of chemistry at the University of East Anglia.

Examining protein structure

Principles of Protein Structure
by G. E. Schulz and R. H. Schirmer
Springer, DM54.00
ISBN 3 540 90386 0

The distressingly irregular shape of the myoglobin molecule, the first globular protein to be seen in three-dimensional detail, came as rather a shock to well brought up crystallographers. Myoglobin is actually one of the more regular proteins, but we are, some 20 years and 70 proteins later, beginning to discern the order that stands rooted in the apparent disorder of their structures. The folding of protein chains can now be seen to fall into different classes, a relatively limited number of patterns being energetically favourable. The stability of this folded chains depends upon a very subtle balance between the enthalpic terms that hold chemical groups together and the entropic terms that are inimical to a highly ordered arrangement. Paradoxically, in the complete system of protein plus solvent, it is the greater ensuing randomness of solvent molecules that pays for the order in the folded protein.

The three-dimensional structure of the folded protein is a consequence of the linear sequence of its constituent amino acids and we are reaching a good understanding of the factors that cause local sequences of amino acids to fold into well-defined segments of secondary structure and these segments then to associate into a favourable tertiary structure. We are still, however, some distance from being able to predict a complete three-dimensional structure from the sequence.

The striking similarity between the myoglobin molecule (from the sperm whale) and each of the four chains of haemoglobin (from horse) revealed two distinct facets of evolution at the molecular level: (1) the development of new chemical functions and greater precision of control of living systems by a process of molecular adaptation; (2) the fact that an overall similarity of structure between corresponding proteins from different species embraces detailed chemical differences at the molecular level that underlie the gross differences between whole organisms.

Structural studies of proteins have revealed evolutionary relationships, not only between molecules of similar function but also between others whose chemical and functional relationships had not been suspected. They have also shown convergence towards similar patterns of structure and catalytically effective chemical groupings in otherwise unrelated proteins.

Knowledge of the three-dimensional structures of proteins has revealed the basis of biological specificity, the remarkable precision of biological control processes and the extraordinary efficiency of enzymic catalysis, processes that man is now trying to harness.

Although there have been many excellent reviews—and the monograph by Dickerson and Geis (*Structure and Action of Proteins*, Harper & Row, New York, 1969) remains a surprisingly up-to-date and valuable introduction — those concerned with teaching, and research in the field have long felt, in need of an authoritative text. *Principles of Protein Structure* is the gap admirably. It does seem, however, some familiarity with the subject, and the final two chapters which are essentially commentaries from a structural point of view on protein-ligand interactions and on the basis of enzymic catalysis, demand supplementation from an up-to-date text on enzyme function.

The sentence "Unnecessary detail tends to hide essential features" (chapter seven) epitomizes the content and style the authors aspire to. Occasions are rare when their choice of words betrays that English was not their first language, and there are many happy turns of phrase which strikingly illuminate a point. Chapters are essentially self-contained and clearly divided into short sections so that the book can be equally easily be dipped into or read through, although a few sections (for example, on the balance between enthalpic and entropic contributions to chain folding) are too condensed for ready comprehension for the reader to be able to apply the approach described without further reading. The references are often guides to supplementary reading rather than to the original literature but they are very numerous (over 800) and commendably up-to-date.

I, for one, am grateful to the authors for producing a text that I can recommend thoroughly to advanced undergraduates, postgraduates and my colleagues.

A. C. T. North

A. C. T. North is professor of biophysics at the University of Leeds.

Unity of inorganic chemistry

A Theoretical Approach to Inorganic Chemistry
by A. F. Williams
Springer, DM98.00
ISBN 3 540 09073 8

Little, if anything, in this book is new and yet I think that it could prove to be a most significant work. It is, of course, up to date in factual content. It is very clearly written, with that linguistic precision characteristic of a firm grasp of the mathematical basis of topics which, for the most part, are presented descriptively. But these features alone would not unduly distinguish the book. What is so important is that Dr Williams has, with considerable success, imposed an overall philosophy upon his subject matter so that the book has an unusual unity about it. This unity proceeds from the theoretical basis laid down in the two opening chapters on "Quantum Mechanics and Atomic Theory" and "Simple Molecular Orbital Theory". They are admirably simple and admirably sure-footed, covering a surprising amount of ground and identifying features for later qualitative use. The section on "The Use of Symmetry" is, however, far too condensed to serve as the only instruction on the subject, and I felt the same about "Atomic Spectra".

Having established a basic repository of bonding theory and symmetry methods, this is used in giving accounts of electronic spectra and magnetic properties, mechanism and reactivity, and a concise survey of main group, transition metal, lanthanide and actinide descriptive chemistry. The underlying unity can be felt most strongly through the consistent use of molecular orbital theory, in which context are set special cases such as electron-deficient and cluster compounds, and ligand field theory (marred only by a confusion of ligand field splitting parameter with LFSE). A tentative attempt is also made to encompass the solid state, contrary to a brief descriptive pass at band theory. Information accessible using modern physical methods is outlined, as are various thermodynamic and other aspects of solid and solution chemistry.

Who will read it? Certainly most inorganic lecturers could do so with profit and enjoyment for its thoroughly integrated modern outlook. Were I a tutor at Oxford I would unhesitatingly recommend this book to at least a majority of undergraduates; it would be unrealistic to do so in some provincial universities, particularly those departments where staff are apparently able to allow students to graduate in chemistry lacking in both formal quantum mechanics and group theory, and still sleep at night. For many students it would be a most valuable text for placing things in perspective in their final year. The point is that this book sets a benchmark by which anyone who consider that they are able to handle basic modern inorganic chemistry must measure themselves.

David M. Adams

David M. Adams is reader in chemistry at the University of Leicester.

Politics books

Perspectives on the Palestinian question

The British in Palestine: the mandatory government and the Arab-Jewish conflict
by Bernard Wasserstein
Royal Historical Society, £8.45
ISBN 0 901050 45 8

The Question of Palestine
by Edward W. Said
Routledge & Kegan Paul, £7.50
ISBN 0 7100 0498 2

The Palestinian Covenant and its Meaning
by Y. Harkabi
Vallentine, Mitchell, £8.50 and £3.95
ISBN 0 8530 3200 9 and 3201 7

The history of the British Mandate in Palestine and its aftermath is a seemingly inexhaustible subject. These three books approach the topic from different standpoints and while one is basically a historical work the other two are written from a more obviously partisan point of view.

Only the adverb needs to be deleted from the concluding sentence of Dr Wasserstein's book: "The British Mandate was perhaps doomed from the start". In Impressive fashion he follows the early years of the British in Palestine 1917-29, and the problems met by those officials who attempted to work the mandate with its commitment to establish a Jewish National Home, and who in their daily work were drawn into a torment of conflicting expectations, attitudes and loyalties, a confusion of social, religious and ethnic prejudices. For them, a disinterested or neutral stance seemed hardly possible and from the moment Balfour issued his Declaration the inevitable process of conflict began.

This position was further complicated by varying British attitudes about what should be done: Some had a certain liberal sympathy for the Jewish desire to colonize Palestine and believed that the Arabs were an inefficient people in need of firm European guidance. One British observer, quoted by Wasserstein, characterized the Arabs as "a craven cowardly lot, afraid of the dark and only game for such sneaky work as sniping . . . or knifing people in the back". Those who held such beliefs could easily be persuaded that Palestine was a backward country waiting to be redeemed by Jewish enterprise; and Weizmann, the Zionist leader, played on such prejudice. He wrote to Balfour that the "Arab official knows the language, habits and ways of mind of the country, is a 'roué', and therefore has a definite advantage over the fair and clean-minded English official who is not conversant with the subtleties and subterfuges of the oriental mind".

However, sympathy for the Jewish cause was counterbalanced by two other factors. First there was prevalent in Britain, especially during the years 1917-20, a current of anti-semitism which made other Britons hostile to Zionism and consequently rather more sympathetic towards the despised Arabs. Anti-semitism derived from a traditional feeling of religious hostility towards the Jews and from the belief that the Bolshevik revolution was a Jewish conspiracy. Sir Gilbert Clayton, the Chief Secretary in Palestine, was convinced that the country had "to be run by pure-bred Britishers" and suspected that there was "an intangible 'something' behind everything, an unseen influence—something stealthy and certainly not British". In addition, these same British officials believed that the Palestinian Arabs had been betrayed, once promised on independence of which the Balfour Declaration made nonsense. Clayton had also written: "I cannot conscientiously carry out any line of policy which will go against our pledges to the Arabs."

This confused state of affairs (not quite clearly explained by Dr Wasserstein) was worsened both by the British Government's insistence that it could not, as a matter of honour and self-respect, withdraw or modify the Balfour Declaration, and by constant Zionist pressure. Most Zionists were striving for a Jewish majority and a Jewish state (even Lord Samuel admitted this although he tried to camouflage his views), and they knew that it would have to be imposed in the face of Arab opposition. The realist, David Ben-Gurion, declared as early as 1919: "There is no solution to this question!" Thus the various officials on the spot were placed in an impossible dilemma. The Jews, with their devotion to the Zionist Agency, interpreted British attempts at "fair play" as efforts to temper with the concept of the Jewish National Home, and they began to behave as a state within a state, receiving extra pay and even weapons from Jewish sources. The Arabs working in the mandate government felt that they could not honestly carry out policies they considered detrimental to the well-being of their country, religion and society. The British officials might resign, be transferred, or remain, but were obliged to attempt, in the tradition of disinterested civil servants, to carry our impractical policies. All of them left in 1948 when the British Government, as befitted the locale, washed its hands of the matter.

The Palestinian Arabs were left to face a situation not of their own choosing.

Until recently their propaganda has been rather ineffective and stilted by rhetoric. They have a strong case, best made by a Palestinian, which has now been effectively articulated by Edward Said. He is the most eloquent Palestinian writing in English today, a professor of English in America, a refugee, a member of the Palestine National Council and author of a recent work, *Orientalism*, in which he attacks traditional Western imperialist attitudes of contempt for the "oriental". *The Question of Palestine* stems directly from the earlier book, as he believes that at the root of the Israeli-Palestinian dispute lie those very same attitudes which have enabled the Western world to admire and support Zionism while at the same time ignoring the plight of the Palestinians and dismissing their justifiable demands. He declines his aim in writing the book has been to "open the discussion of the question of Palestine to a much-denied, much suppressed reality—that of the Palestinian Arabs of whom I myself am one".

There are two main themes running through the work—that of Zionist and Western attitudes towards the Palestinians, and of the Palestinians' attitude toward themselves. Zionist leaders deliberately built up a picture of the backwardness and inferiority—even the non-existence—of the Palestine Arab (Professor Said uses some of the same quotations as Dr Wasserstein to prove his point) and pictured themselves as the rescuing heirs of a neglected land and the protectors of democracy in the Middle East. These beliefs have been current in the United States where opposition to Zionism, or any claim for the rights of the Palestinians, can easily be blackened as antisemitism. The Zionist lobby has been so powerful that until recently the Palestinians have had no voice. The author bitterly contrasts the universal condemnation of PLO terrorist attacks with the half-hearted criticism of Israeli bombing of Lebanese villages.

The Zionist push to acquire and occupy land and found a state has meant inevitably all Palestinians have suffered in some way—the degradation of second-class citizenship in Israel, the humiliation of occupation on the West Bank, or the frustration of exile throughout the world. The results of war, politics and economics have more recently facilitated two processes—that of Palestinian self-awareness, as a people and nation, and of a slow recognition by the West that the Palestinians do have rights which have been largely ignored for a hundred years. Professor Said emphasizes that throughout this period Palestinian opposition to Zionism has been unremitting (although unsuccessful) and that not one Palestinian quisling has appeared.

He ends his book by condemning the Camp David agreement for excluding the PLO from the discussions and President Carter for not having officially consulted those people mainly concerned. His plea is for understanding and reconciliation and for the establishment of a Palestinian mini-state on the West Bank which could co-exist with Israel. His statement: "As far as I am concerned, the Palestinian mission is a mission of peace" will probably be greeted with sheer disbelief or derisive laughter in Israel and it is unfortunate, as he admits, that he is speaking only for himself. Nevertheless, this moving book should be read by everyone interested in the question of Palestine.

Professor Said complains that the views of Palestinians in Israel and the West Bank are too often filtered to the West through the words of Israeli experts on the Arabs. Yehoshafat Harkabi is one such expert, and his book on the Palestinian covenant is an example of this filtering and is in a way an answer to Said's claim that the PLO, meeting in 1977, agreed to accept a state on the West Bank and to let future relationships determine themselves peacefully. This was a majority decision but one which entailed the recognition of Israel. Harkabi points our that this leaves the door open to irredentism, implying that any method to regain territory — war, guerilla tactics, terrorism or subversion, may be used.

It is clear that the gap between Palestinian and Israeli, originally opened wide by the British, remains and can not be closed until the two sides can meet and recognize each other's rights.

Derek Hopwood

Derek Hopwood is fellow of St Antony's College, Oxford.

Scientific approach to politics

The Scientific Study of Foreign Policy: revised edition
by James N. Rosenau
Frances Pinter, £15.00 and £6.95
ISBN 0 89397 074 3 and 075 1

This is a collection of essays all of which have been published over the period 1957-79. They are grouped together in four categories: the scientist; the science; basic concepts; and the international and domestic context. There is a heavy emphasis on "scientific" methodology in the study of foreign policy and inter-state relations, by which is meant the definition and formulation of concepts, the organization and analysis of conceptual schemes, and the attempt to apply general hypotheses to foreign policy making. The author throughout is insistent on the tentative nature of such an approach, and on the need for what he calls "pre-theory".

The most significant revision seems to be in the author's growing misgivings as to whether his work is "founded on the wrong questions". But, apart from this rather tantalizing admission, Mr Rosenau does not specify what he feels to be wrong. Rather he leaves this to his readers and argues that if others feel any of his ideas have misled them, such an outcome is their problem and not mine". This denial of responsibility is a pity, since it begs the very question as to the validity of the "scientific" approach in providing an adequate explanation of why people, organized into states, do what they do to each other.

Mr Rosenau is a liberal academic. He does not assert that his approach is superior to any other. From the early work of Thomas Kuhn he takes the view that a discipline is simply a consensus of academics. Truth is 51 per cent. Admittedly in his own field no general consensus exists. But the fault, if fault it be, lies in the perverse individuality of academics who prefer their own theories to the tyranny of others. Theorizing is a virtue and eventually perhaps there will be a convergence and a consensus will emerge. Though how this might come about Mr Rosenau is as uninformative as Mr Kuhn.

The problem is that although he is aware that scientists have criteria by which they accept and reject empirical hypotheses, he does not specify what these should be in the case of hypotheses about human actions and decisions in the field of foreign policy making. The emphasis on conceptual analysis and the proliferation of conceptual schemes masquerading as "theories" are inevitable consequences, nor only of the kind of cross category mistake which equates notionally with atoms, but of the refusal to concentrate on appropriate criteria of assessment and evaluation. Scientific practice—its procedure of testing through experiment and observation—made scientific knowledge possible. In formulating a question it is necessary to know in advance what would count as an answer. Conjecture is mere conjecture in the absence of any reference to evaluatory criteria.

The emphasis on the terms of theory—its content as it were—in the social sciences, is mistaken, for what is needed is a set of procedures by which theories can be validated and a "scientific" knowledge grounded. Whether this is at all possible for explanations of human action is debatable. But accepting that it is, the question as to whether a crude translation of scientific practice into the field of foreign policy-making is appropriate should at least be discussed. Perhaps other criteria, distinct from those employed in the natural sciences, might be more relevant to human behaviour.

Such criteria may indeed be conventional in nature, in that they are agreed by practitioners and emerge out of practice. But such an agreement necessarily precedes any consensus on theory. Theories are formulated in the light of the tests to which they are subjected. If they are not, and if no such tests are available to the "scientific" practitioner in the field of international politics or foreign policy, then the result is a plethora of "theories", and confusion.

It is sad to see in this collection, which spans some 23 years of intellectual effort, no more than slight misgivings on the validity of the "scientific" enterprise. If Mr Rosenau were aware of developments in other branches of the social sciences—in sociology, for example—he might have turned this feeling of unease into a rigorous examination of the application of scientific method to his field. And had he pushed his philosophical reading beyond Kuhn he might not take scientific method so much for granted.

Charles Reynolds

Charles Reynolds is senior lecturer in politics at Durham University.

Powers in government

The Government of the United Kingdom: political authority in a changing society
by Max Beloff and Gillian Peele
Weidenfeld & Nicolson, £12.50 and £6.95
ISBN 0 297 77589 8 and 77618 5

It is significant that a new book on our system of government should use in its title the United Kingdom rather than simply Britain and perhaps equally a sign of the times that it should begin with a chapter on the constitution. Events in the 1970s have made constitutional concerns once again respectable and in this book the authors rightly anchor their discussion firmly in the context of the challenges faced by the constitution in recent years. The discussion of some of these issues, for example parliamentary sovereignty and Europe, violence and the rule of law, nationalism and the unitary state, the place of the referendum, collective responsibility, open government and minority government, is one of the most useful parts of the book.

Although the authors claim at the outset that "at times our interpretation will be a controversial one", on the whole their judgments are safe and well balanced. This is a careful and clearly written discussion of the major aspects of the subject, though inevitably the choice of areas of emphasis will not please all. The use of "government" in the title may explain partly why some topics receive rather brief treatment, for example interest groups, voting behaviour and the social bases of politics. In the light of this a whole chapter on the functions of government may be over-generous. Similarly, while the topic is of increasing importance, and the discussion of it here well done, the chapters devoted to law, civil liberties and redress of grievance, may appear excessive.

The book is commendably up to date in its discussion of areas of controversy and in its use of examples: no small advantage for its readership among students whose political memories will often go back no further than the mid-1970s. No book in this field can ever quite cope with the speed of change, and the recent abolition by the House of Commons of many of its better known committees obviously came just too late to be included; though their replacements era at least tentatively referred to.

The publishers claim that the book is intended for both the general reader and the student. One wonders whether there are general readers who will want to pursue the subject for almost 400 pages; but for the student there is a solid body of information and reliable interpretation. Occasionally there are lapses: it is somewhat misleading to say that the Liberals gained 23.6 per cent of the votes in February 1974; and the view that until the 1970s "the proceedings of Parliament had commended much attention" might be objected to both by those who would put the decline of interest in Parliament rather earlier and by those for whom, at least for part of the 1970s, Parliament was rather more than usually interesting.

Inevitably comparison will be made with books whose titles overtly embrace government and politics and in that respect some of the imbalances noted earlier may prove a handicap.

R. L. Borthwick

R. L. Borthwick is senior lecturer in politics at Leicester University.

Oxford University Press

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The racial mix in armies

Ethnic Soldiers: state security in a divided society
by Cynthia H. Enloe
Penguin, £2.50
ISBN 0 14 022229 4

By far the largest number of the world's nine hundred and seventy odd politics are multi-racial, and unsurprisingly, their security forces are multi-racial too. But this does not mean that the ethnic composition of these forces reflects that of the population at large. There is a mismatch, with some groups being under-represented and others over-represented.

So far this fact has been noticed only parenthetically. Professor Enloe however has asked an "idiot-boy" question: "Why does this mismatch occur?". It turns out to be a bombshell and it scatters other very important subsidiary questions such as what effects the mismatch has on the role and performance of the forces, and what effect it has on the ethnic minorities themselves. At first glance the information is contradictory. In one state the predominant ethnic group predominates in the armed forces also—in another, like Syria, a small minority group, the Alawites, has become predominant. In some cases the armed forces maintain their cohesion in the midst of inter-ethnic strife while in the Lebanon they disintegrate into their ethnic components.

Professor Enloe has thoroughly succeeded in unravelling this tangled skein and advancing a number of general explanations. To do this she has invented a powerful analytical concept, the notion of an "ethnic map". Briefly, she postulates that ruling groups recruit—or at any rate may be deemed to recruit—to the security forces by virtue of a more or less explicit "ethnic map" on which they locate the various ethnic groups in their society according to their estimated political reliability and political resources. When their prime consideration is to recruit elite troops, their ethnic map will locate so-called "martial races"—sub-groups who are deemed to be both of high fighting quality and politically reliable. When their prime consideration is quantity rather than quality and numbers and cost become pertinent, they will have to weigh up the availability of certain ethnic groups against their political reliability. Furthermore in this selective recruiting the ethnic groups' self-perception may itself change, some such groups becoming more or less self-conscious or more or less politically loyal.

This is merely to summarize the author's preliminary line of attack. From this point on she pursues her inquiry into special forces like air forces, navies and the police, as well as in armies; into situations when the military acts as the sustainer of public order as well as when, through a coup, it acts as the subverter. She also traces the alternating rise and fall of ethnic considerations in any individual state over time; and the different patterns of ethnic recruitment and its consequence as between one state and another. This extremely wide-ranging inquiry is conducted with great economy in the compass of some 120,000 words—a remarkable feat in itself.

There are a number of matters on which I find myself dissenting from the author and others where, without altogether dissenting, I find myself sceptical. I think I shall not be the only reader to be surprised at the assertion that "the English are credited with creating the first modern police force (France, Prussia, Spain?) (or at the (no cureory) account of the pre-1829 origins of the English constabulary. I think her analysis of conscription, and whether it is introduced to heighten soldiers' participation or merely to supply cheap manpower, would have benefited from studying the advocacy of conscription on the German model that was being conducted by many English observers, like Spencer Wilkinson, at the turn of the century; or even better perhaps the great debates in France after 1871 over the same issue and the subsequent forging of the concept of *L'Arche Sainte* in that country.

Sometimes, too, Professor Enloe is so engrossed with the importance of her theme as to relegate to the sidelines what appear to be the more salient issues—class cleavage, for instance. In another context she suggests that military coups are much less interesting "from an ethnic approach" than the general state of the "military/ethnic connexion". From "an ethnic approach" this may well be true. Equally it may be trivial. For one can hardly dismiss as "less interesting" or "less important" such consequences of a coup as the destruction of a country's civil liberties, the decline or revival of its economy, or a revolution in a regional balance of power. Happily, for an author so singlemindedly intent on pursuing the ethnic connexion, these bursts of over-enthusiasm are remarkably few and the last impression I want to create is that this is simply another ephemeral product of the race-relations industry. On the contrary it is and will remain a model of how research into this field ought to be conducted.

In the first place, the work is wholly original. Nobody, to my knowledge, has hitherto conducted a systematic examination of this theme, and in the course of doing so, Professor Enloe convincingly demonstrates how important is an hitherto neglected aspect of military format and the military role. Furthermore, it is genuinely comparative, its range of examples and illustration being remarkably wide: from Ulster to the USSR, from the industrialized countries to those of the Third World. Such a proliferation of climates, states, military formations and races could easily have daunted or muddled a less capable mind. What particularly impresses me is the cool analytical rigour with which Professor Enloe is able to analyse, systematize and ultimately, to generalise her way through this great mass of information—and, too, the grace with which she does so.

Finally, one has only to look at the critical apparatus and the number of scholars she consulted when the documentary sources were not clear or inadequate to see how painstakingly she applied herself, over five years, to accumulating her materials. Certainly this is a most praiseworthy book: and it is the most original and well-conducted piece of research into civil-military relations that has come my way for a decade.

S. E. Finer

S. E. Finer is Gladstone professor of government and public administration at Oxford.

The problems of peace-keeping

The Challenge of Peace
by Kurt Waldheim
Weidenfeld and Nicolson, £7.95
ISBN 0 297 77586 3

United Nations Peace-keeping 1946-1967: documents and commentary, volume three
edited by Rosalyn Higgins
Oxford University Press, £30.00
ISBN 0 19 218321 4

Kurt Waldheim's book is a discursive and informal account of the life and work of the Secretary General of the United Nations and of the issues in which the United Nations was involved during his office.

There is nothing particularly informative or inspiring in this popular account. It has been written to promote a greater understanding of the frustrated role of the United Nations and its Secretary General. Though he has learned to live with the frustrating limitations of his powers, he wants the media and people generally to understand these limitations so that they might expect less.

Waldheim's academic and career backgrounds are in a traditional sense ideal for the post—law and diplomacy followed by politics. But perhaps if the Secretary General had a background in philosophy and behavioural sciences he might have delved more deeply into the causes of the United Nations' limitations. In the Somalia case for example, Waldheim asserts that "For different reasons and at different times, then neither side wanted United Nations intervention". Someone not committed to traditional settlement processes, could ask whether the forms of intervention offered were relevant to the needs of parties to a conflict. Can authority allow itself to be placed in a position to which it must accept a judicial settlement or a compromise that may be the outcome of adjudication, mediation or conciliation? Should not the role of the third party be non-judgmental, non-coercive, non-persuasive and designed to assist the parties analyse their relations in a non-bargaining framework with a view to arriving at a resolution of their conflict?

Waldheim considers peace-keeping, as distinct from intervention or peace-making, as a major activity for the future. But peace-keeping merely freezes conflict, and at best leads to stalemate at high cost. We need to, and we can, do better. The knowledge is available but has not yet been applied.

Rosalyn Higgins's third volume of UN documents deals with UN intervention in the Congo, 1960-64. Like her two previous volumes on UN peace-keeping operations, it contains all relevant UN documents together with appropriate and restrained explanation. It provides invaluable material for the researcher, and at the same time is a most readable account of an operation with which we are all familiar, but on which we are mostly poorly informed. A fourth volume, dealing with the Balkans and the Cyprus Force is still to come. One hopes that there will be a fifth, that will draw together the threads and examine UN experience in depth.

The approach is functional, with sections on the enabling resolutions; legal and conditional basis; control mechanisms; administration; and implementation. Separate treatment is given to the relations of the UN with states participating, the host state and states that took a particularly active part in the Security Council or in the Congo itself. A full picture emerges, though at the expense of some repetition of documents and comments, and sometimes it is difficult to perceive the chronological sequence of events. An historical treatment, followed by comment under the functional headings, might have been preferable.

The UN commitment to the maintenance of "the territorial integrity and the political independence" of the host state emerges clearly, together with his associated problems. Secession is a dirty word, especially with the Soviet Union. The UN documents are strongly state-centric. No one seems to question that state authorities—whether representative or not—have the right to expect exclusive recognition and assistance, whereas regional factions do not. Given the nature of colonial boundaries and the distribution of ethnic groups, the future of UN interventions of this kind must be thrown into doubt.

These documents and commentaries will be invaluable to the student working within the state-centric notion of which the UN is part. Assumptions about integration, boundaries, sovereignty, rights and obligations of majorities and minorities within a state, are those with which we are all familiar, but on which we are mostly poorly informed. A fourth volume, dealing with the Balkans and the Cyprus Force is still to come. One hopes that there will be a fifth, that will draw together the threads and examine UN experience in depth.

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P. W. Burton

Dr Burton is reader in international relations at the University of Kent.

Tyrannies all

Tyranny and Legitimacy: a critique of political theories
by James S. Fishkin
Johns Hopkins University Press, £7.25 and £2.75
ISBN 0 8018 2206 8 and 2256 4

It is really necessary to devote even a short book to defend the principle that "Harms—especially serious ones—cannot be justified when they are entirely avoidable by everyone"? Professor Fishkin thinks that it is necessary because this principle of "non-tyranny" is violated by all currently popular political theories (by which he means normative justificatory theories of government). Whether we espouse procedural principles of legitimacy such as majority rule, or structural principles such as Rawls's theory of justice, or absolute right principles such as Nozick's theory (that we are entitled to do whatever does not violate the rights of others), we run up against the objection that the consistent application of such principles is tyrannical. Fishkin's conclusion is that political theorists must stop and think again about their ultimate criteria for making social choices.

Although the author starts off with the example of Idi Amin ordering the expulsion of Asians from Uganda, the book discusses few concrete examples of tyrannies. This may not matter for Fishkin's restricted purposes, but it should be noted that he interprets his principle of non-tyranny so that it covers the *omission* of acts which could alleviate deprivations. On this basis I would surmise that all governments are tyrannical because they all fail to relieve some avoidable sufferings. This is no mere terminological point: Fishkin uses the fact that certain sins of omission are not ruled out by the principles he is criticising as a prime weapon against the principles.

Fishkin fails in another way to capture the normal concept of tyranny by concentrating on those inflictions of severe deprivation which result from the rigid application of principles without exceptions or qualifications. Such fanaticism may be a form of tyranny but it does not relate to the arbitrary and often entirely unprincipled behaviour which is more commonly associated with the idea.

Fishkin deals competently but unoriginally with the familiar problem of the "tyranny of the majority" as his example of the inadequacy of a purely procedural principle for protecting the interests of minorities. He also has little difficulty in pointing to the moral disgraces which would be legitimated by anyone doctrinaire enough to attempt to put Nozick's theory of justice into practice. He is less successful against Rawls, whose theory does contain very clear efforts to protect the interests of everyone by insisting on the "lexical" priority of equal basic liberty, a principle which must be satisfied before his now famous "maximin" principle applies.

Fishkin's basic objection to structural principles such as Rawls's is that they can offer no reason why we should not shunt individuals from one position in society to another, thus inflicting severe deprivations on those well-off persons who are arbitrarily allocated grossly inferior positions in a justified overall structure. But if such deprivations are felt to be important I see no reason why the (surely rule-governed) procedures for making such switches should not be subjected to the scrutiny of the maximin principle.

Perhaps the most important contribution of this lucid if slightly disappointing book is the discussion of what is to count as severe deprivation or harm. Fishkin presents an analysis in terms of essential interests which incorporates both the intensity of individual preferences and normative standards of subsistence and life chances. However the issue does seem to be fudged in that a careful reading of the relevant passages has not made it clear to me that he is able to exclude outlandish personal preferences as contributing to what is counted as a severe deprivation. Tyranny may therefore result from a government's failure to satisfy my insatiable desire for marshmallows. If this is so then we have a further weakening of the practical relevance of Fishkin's critique.

T. D. Campbell

T. D. Campbell is professor of jurisprudence at Glasgow University.

Turkish democracy

Democracy and Development in Turkey
by C. H. Dodd
Rothna Press, £9.50 and £4.95
ISBN 0 906719 01 1 and 00 3

When they wish to clear themselves up, Turks are apt to remind themselves that their country is unique among the states of the Muslim Middle East in operating a secular, multi-party political system. However, their commitment to democracy is currently passing through its severest test, as a tide of political terrorism turns streets, factories and classrooms into battlefields, and as spiralling inflation and unemployment threaten the country with total economic collapse. Unfortunately, students of politics in developing countries are often deterred from any full examination of the complexities of Turkish politics by the absence of up-to-date reading. Professor Dodd has now met this need with his concise and illuminating survey.

It begins with a brief summary of the historical background to modern Turkish politics and of the social, economic and institutional structure within which Turkish politicians must operate. The description of contemporary social and economic change is particularly valuable, since this is an element which has been generally lacking in earlier studies of modern Turkish history. Professor Dodd is a political scientist, rather than an historian, nevertheless his second chapter, on political legacies of the Ottoman past, provides some useful historical perspectives.

The main part of the book outlines the major features of the political system, with chapters on political elites and political culture, on parties and voting, and on the more importantly extra-parliamentary groups of political actors—the military, the bureaucracy, trades unions, employers' organizations and students. The constitution is not neglected but it is, quite rightly, given less emphasis than the less formal institutions of politics. The behavioural approach is not without its defects: many of its judgments, for instance, must be based on survey data which, as Professor Dodd admits, may not always be reliable. Accordingly, he supports his arguments with other evidence of a more general character.

Is Turkey a democracy? Can it continue to develop economically under a liberal political system? These are the questions the author sets himself in his final chapter. On the first score, he decides that Turkish government is democratic even though "custom, prejudice and long established economic and social connections influence voting and other expressions of political interest, more than in most liberal democracies of the western world" (page 179-80). On the second question, he meets the argument for more authoritarianism by pointing out that, in the Turkish case, the economy has, in general, grown fest under multi-party government, and that the demands of the electorate are not necessarily different from those of the economic planners.

Even if more pessimistic readers may not agree with all his conclusions, they must admit that Professor Dodd has presented us with a clear and balanced guide, mercifully free of the exotic jargon which infests the prose of most writers in this field. It relies primarily on secondary, rather than original sources, but is none the less valuable for that. It is a completely reliable, as well as readable and objective study of an important, if sometimes baffling topic.

William Hale

Dr Hale is lecturer in Middle East politics at Durham University.

A formidable, flawed figure

Pakistan under Bhutto 1971-1977
by Shahid Javed Burki
Macmillan, £15.00
ISBN 0 333 25673 5

We follow Bhutto "as he feints and manoeuvres in the thick of the power game".

Developing nations' politics are often presented, by the right and the left, in the form of a morality play. There is something to be said for this, but it is useful to be reminded that most Third World leaders see politics mainly as a mundane struggle to stay in power. In this solid volume, Shahid Javed Burki has managed to convey this and a good deal more besides.

He writes as Machiavelli might have done if he had studied economics and policy studies at Harvard. Part of the time we are peering over Bhutto's shoulder as he feints and manoeuvres in the thick of the power game. Then the author takes a step back and becomes a biographer offering a cold-eyed assessment of his man. In this he avoids the simplistic views that so often creep into studies of "leadership" by showing that a leader's traits and actions are linked not only to his personal development but to economic and social conditions as well.

Burki provides a helpful summary of Pakistan's post-independence history up to 1971 when Bhutto took power. Here and in his treatment of Bhutto's years in power, he is especially strong on the interplay of politics and economics. This is done subtly, without the all too common use of economics to unveil the "real" forces behind political action. He shows that when power is highly centralized in one person's hands, as it often is in less developed countries, politics can dominate economics.

By ranging en widely, Burki is able to capture most of the essentials in Pakistan's mournful story. Here is a country assailed by misfortune from the start, badly divided by much more than geography, without strong parties or institutions to knit it together, with a shortage of gifted leaders and a tendency among those that it had to over-reach themselves. The author is particularly effective in explaining how successive leaders and regimes shifted from one political base to another and contributed to Pakistan's already severe difficulties at achieving some sort of equilibrium among various social groups.

Over all of this looms the formidable, flawed figure of Zulfikar Ali Bhutto. He was better equipped than any leader Pakistan has had to help the nation develop some sense of direction and cohesion. He understood the need for substantive political organization and yet he so overcentralized power that his organization withered. He understood the role of ideology in political movements and yet he held back from the ideological commitments that were needed to give his regime a sense of purpose and a firm power base.

The vagueness of his populism, his vanity and naivety were essentially his undoing. In this he offers parallels to so many leaders in the new nations: Nkrumah, Bandaranaike and numerous others. This book should be required reading for Indira Gandhi. The unfulfilled radical promises, the inconsistency between urban and rural policy, the shift from radicalism to ad hoc-ism, the destruction of an old system with nothing to take its place, the drift into purposelessness—it is all here in Bhutto's Pakistan.

The book has its weaknesses. What the author sees as his central conclusion, that the changes which Bhutto wrought in Pakistani society carried the seeds of his political destruction, remains unproven. The evidence offered can also be read to show that Bhutto's tactical miscalculations caused him to fall. Burki offers two rival different versions of his "main purpose" and at times uses terms like "class" loosely and crudely. He is occasionally given to overstatement and to wrongheaded aphorisms. My favourite is "Astute politicians do not take decisions in uncertain conditions" (page 172). Politicians, astute or otherwise, often have little choice but to act amid uncertainty. Nor is Burki fully aware of the great and perhaps decisive importance of Bhutto's failure to build a solid political organization. He even shares some of Bhutto's naivety about what it takes to build such an organization. This naivety and the failure that attends it is a common affliction among populist politicians from Islamabad to Alabama, and deserves study.

But despite all of this the book deserves a hearty welcome. It is well worth the time of anyone interested in human frailty and the exercise of power in the absence of strong institutions.

James Manor

Dr Manor is lecturer in politics at Leicester University.

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US relations with China

The United States and China in the Twentieth Century
by Michael Schaller
Oxford University Press, £6.95
ISBN 0 19 502598 9

This is a study of American relations with China during the nineteenth and twentieth centuries with the main attention on the period since 1937. It summarizes in a readable way many recent works on this subject including the author's own longer study entitled *The United States' Crusade in China 1911-1945* (1979), which are listed in selected additional readings for each of the nine chapters. It has a useful double spread map and some excellent illustrations.

Its theme is the puzzling shifts which have occurred in diplomatic relations between the USA and China from the time of Theodore Roosevelt's characterization of the Chinese as an "immoral, degraded and worthless race" to Truman's recognition rather belatedly that the Chiangs, Kungs and Soongs "were all thieves, every last one of them". The USA shored with the rest of the major industrial nations the false belief that China represented a vast market in which they could hope to find a ready sale for their manufactured goods. This idea was accompanied by another equally false that China had become a mighty world power which offered a serious threat to the USA abroad. Later these myths were overlaid by the belief that China was completely under Soviet control. The author indicts the American statesmen and China experts who subscribed to these false ideas and did so much damage thereby to the interests of both countries, leading ultimately to the disastrous American policy in Vietnam.

There were, of course, some brilliant exceptions. General Stilwell did not share the commonly held American belief that Chiang was the great hope for the salvation of China, characterizing him as a "stupid little ass" and nicknaming him "Peanut". But even he never fully understood the Chinese revolution of 1949, and Kennan was almost alone in believing that China would not be under Soviet control because nationalistic elements in the Chinese Communist Party would limit Soviet influence. Nixon's concern to play the China card in order to concentrate resources on the defence of Western Europe is clearly shown as the foundation for the present American policy towards China.

There is an excellent brief account of the way in which the American foreign service was "terrorized and gutted" by the campaign associated with Senator McCarthy from 1950 to 1954 which the author describes as "draping a pall over US-China relations which lasted until 1971". There is a very useful summary of the review of American defence policy ordered by President Truman in January 1950, which emerged as National Security Council document 68. It predicted a "long-term confrontation between the 'free world' (led by the US) and the communist camp (led by the USSR)", calling for a trebling or quadrupling of United States defence expenditure, which became almost immediately politically possible when America was involved in the Korean War.

As the author says "it is very hard to understand China's intense hostility to the United States", given that the latter had consistently demonstrated its hostility to China. The study of international relations has in recent years moved out of the narrow limits of diplomatic relations in which it was mainly confined earlier. Domestic and foreign policies are increasingly seen to have been shaped by many other kinds of relations between countries. But in the case of China during most of the time covered by Professor Schaller there were very few active relations other than diplomatic ones and policies were formed against a background of popular beliefs that had been handed down from earlier times without modern basis. The most recent opening up of China to a multiplicity of contacts with people of other countries is the concluding note of hope of this work.

It is a useful text for an introductory course in modern Chinese history and international relations, although unfortunately the new romanization of Chinese names and terms is not used.

Maurice Hookham

Maurice Hookham was until recently senior lecturer in politics at Leicester University.

Portrait of a wonder-worker

Jawaharlal Nehru: a biography, volume two, 1947-1956
by Sarvepalli Gopal
Cape, £15.00
ISBN 0 224 01621 0

Jawaharlal Nehru

Professor Gopal rightly describes his book as both the biography of Nehru and the history of the first years of free India. The book as it stands, however, has more the flair of history then biography and deserves a distinguished place among the histories of contemporary India. Based on a large variety of sources including the private papers of Nehru (which are examined thoroughly though not always perceptively) it makes a valuable and solid contribution to the history of independent India.

The book focuses particularly and at length on India's international relations, and brings into the open a host of new facts which generally reinforce, rather than contradict or dislodge, the existing views on India's relations during those years with the United States, Britain, the Soviet Union and China. The Indo-American relationship, with the strain put on it first by the Kashmir question and later by Dulles's direct of India's neutral stand, receives by far the best treatment. Gopal quotes Nehru in support of the view that in the mid-1950s the United States "was seeking to contain India by building up Pakistan".

Gopal gives an authentic account of how and why India joined the British Commonwealth, and refers to Nehru's "revolutionary" ideas of a Commonwealth citizenship which did not get support from the other prime ministers of the club. India's willingness to join the Commonwealth and to remain on intimate terms with Britain and the United States is mainly attributed to the hostility of Stalin's Russia towards India up to 1950. Gopal displays an equally high degree of perceptive objectivity in assessing India's role in the settlement of the Korean War, in the holding of the Afro-Asian Conference at Bandung, and in the diffusion of the Suez crisis. He offers a fairly plausible explanation, based on impeccable evidence, for India's delayed reaction to the Russian intervention in Hungary.

His perception, however, becomes slightly blurred when he comes to Sino-Indian relations. Not only does Gopal not offer any new insight into this subject, but he tends to revive the naive view that the Sino-Indian relationship might have taken an entirely different turn had the Indian officials conceded to China, in the first place, a "suzerainty" instead of a "sovereignty" over Tibet. This exercise in semantics would in fact have made no difference since when Nehru had already admitted that Tibet was Chinese territory. Again, Gopal revives an old argument that India should have backed up the dalineation of the Indo-Chinese borders at the time of the signing of the treaty of friendship with China in 1954. He is unduly harsh on Panikkar (then India's ambassador to China) whom he holds personally responsible for this remissness. From the evidence available on this subject, however, it is quite clear that the Indian thinking at the time was against opening a discussion, and much as Nehru would have liked the initiative to come from the Chinese, he himself believed that there was some advantage in India not raising the issue herself.

The excellence of this book as a contemporary history is somewhat marred by Gopal's disregard for chronology, his scanty treatment of India's domestic problems, and the allusive style of his narrative as evident from the haphazard and incomplete construction of events. The general reader will find this book hard to follow.

The biographical quality of this book is perhaps impaired by the author's uninvolved, rationalist approach to Nehru. Gopal does not seem to exhibit the insight and empathy necessary in order to bring to the fore Nehru's inner personality. Underneath Nehru's self-contradictory behaviour and statements, lay a basic consistency which Gopal has not succeeded to fathom. Instead he has relied on statements made by Nehru on different occasions. As a result, we find a variety of Nehrus enmeshed in many different attributes, often only tenuously related and sometimes not at all.

Lacking in his grasp of the essential Nehru, Gopal is thus at a loss to discover the motives behind Nehru's various acts and omissions. He does not, for example, find the real motive and intention behind Nehru's occasional threats to resign from his office. It is not explained why during a certain period Nehru appears to be all too willing to go to war with Pakistan, if necessary, and then at a later period to be suddenly agreeable to holding a plebiscite in the whole of Kashmir. Nehru's objectives behind his friendly overtures to China remain concealed; the enigma of his love-hate relationship with the British and the Americans is not explored. And so on.

The obvious flaws in this biography, however, are to a great measure redeemed by the offering of numerous extracts from Nehru's correspondence and notes, which particularly give insight into the characters and personalities of some Indian luminaries and their association with Nehru. Gopal offers some brilliant portraits of Nehru's colleagues and friends. Mercilessly, he exposes the cussedness of Krishna Menon, the elusiveness of the cunning Rajagopalachari, the medieval outlook of Rajendra Prasad, the woolly-mindedness of the cross-grained Jayaprakash Narayan, the polyvalency of the overbearing Mountbatten, the idiosyncrasies of Tandon, the incompetence of Home Minister Katju, the secret ambitions of Sheikh Abdullah, and the cheaness and pettiness of M.O. Mathai (Nehru's stenographer with no education but great influence on Nehru). At the same time the greatness of Sardar Patel and the loyalty of Rafi Kidwai receive due elucidation. It took all sorts of men to make Nehru's team, and though some of them were obnoxious, not fit enough for the jobs they held, Nehru was too human to abandon his old friends and colleagues no matter how infuriating their failings. But in Gopal's opinion this may be a "tribute to the man, but not to the Prime Minister".

In his summarizing chapter Gopal gives us a good measure of Nehru's thaumaturgic personality. Though a man firmly enclosed within himself and overburdened with the stupendous task of building a new India, Nehru gave limitless attention to every trivial matters and "occupied a larger area of the national consciousness than the mere office of prime minister warranted".

To a large number of all things Nehru was the measure of all things. As a wonder-worker, in trying to live up to their expectations he led one of the busiest lives of his times.

B. N. Pandey

B. N. Pandey is lecturer in the modern history of India at London University's School of Oriental and African Studies.

Votes cast against the party line

Dissension in the House of Commons 1974-79
by Philip Norton
Clarendon Press: Oxford University Press, £28.50
ISBN 0 19 827430 0

Mr Norton has established a corner for himself in the analysis of dissenting votes in the House of Commons. He has already published a compilation of such votes in the period 1945-74 and a more detailed account of dissent in the Conservative Party during Mr Heath's time as Prime Minister. Now he presents the next batch of evidence for the years 1974-79.

Dissenting votes are defined as those in which some members of the Government or Opposition parties vote against the advice of their Whips. As far as I can see Mr Norton does not consider variations in the weight of the advice issued by the Whips. Three-line whips on a major question are not distinguished from two-line whips on a motion nobody cares about very much. Nor does the author examine the phenomenon of voting as such: why does the House of Commons vote so often? Does not voting serve as ritual and demonstration just as much as a decision-taking procedure? What is the significance of the fact that the Commons does not as a rule seek consensus on government measures, even when there is a sotto voce understanding on both sides that a particular bill is needed? Questions of this kind need to be raised if we are to make sense of something as complex and elusive as the behaviour of individual Members of Parliament in respect of its impact both on parties and their cohesion and on the working of the House itself.

There are few signs, however, that Mr Norton is deeply interested in such subtleties. He proceeds with the remorseless concentration of a heavy tank. His method is to list all eligible votes during his period (426 in all), to provide a short summary of what the motions voted on were about, and to add the basic facts about who from the two major parties dissented. This yields a slab of 423 pages followed by just under 50 pages of concluding commentary. This is the only part of the book which is readable in the conventional sense.

There are many sensible observations in the conclusions to this volume and Mr Norton has certainly demonstrated that more attention should be paid to dissent as expressed in the lobbies of the House. But he overdoes his case. Without doubt there is a greater propensity now to kick over the traces in the division lobbies. This goes back to changes in the composition, character and policy commitments of the main parties: neither of them possesses the kind of sheet-anchor symbolized by the Tory knights and the right-of-centre trade unionists in their respective parties in the 1950s. The parties have lost a great deal of social coherence at a time when disagreement on what to do has become sharper. They also include far more self-made men and more intellectuals.

These are but a few of the underlying developments which have to be considered in relation to the growth of dissent alongside the more contingent causes highlighted by the author, such as issues of devolution and membership of the European Economic Community which cut across party loyalties, or abstinent leaders like Mr Heath. But by fixing his attention on single-mindedly on the dissenting votes themselves I think that Mr Norton runs two risks. One is to narrow the range of possibilities which need to be brought into a satisfactory explanation and evaluation of the outward manifestations of dissent embodied in votes in the House of Commons; the other is to overlook the fact that dissent is variously motivated and an increase in quantity may take place without challenging certain basic notions of party and of constitutional relationships.

Mr Norton's principal conclusions seem to be that the extent of dissent is sufficient to justify some reassessment of the conventional picture of Executive dominance over the Commons, and, secondly, that the thesis of adversary politics may be faulty. I find it hard to agree with him. I accept that Governments now encounter rather more obstacles in regularly carrying all their troops with them. But it seems to me that recent experience reflects very much the peculiar issues which dominated the 1970s as well as a weakening of party leadership, especially in the Labour party, during that period. I do not think that the degree of dissent occurring after 1974 yet represents a serious challenge either to the mode of two-party competition or to the dominant view of how parties in such a relationship should be internally structured. There is still a firm rejection of what can be called bargaining or coalition politics, that being the principal alternative to what I and others have characterized as adversary politics.

The election of 1979 appears to have confirmed the traditional preference for adversary politics. Managing the two parties may well remain a more difficult task than it was twenty years ago, but my expectation is that dissent of the kind recorded here will retain symbolic value for a minority of Members of Parliament rather than build up to a serious reappraisal of the terms on which parties and their leaders should be related and on which the House of Commons in turn should relate to the Government.

In conclusion I must refer briefly to the major part of this book, the catalogue of dissenting votes. At first I felt that it must be useful as a source of research material. On reflecting I am not sure that this is so. Most of the entries make little sense as they stand: to grasp their political significance in the history of the past few years one would have to do a great deal of research into each individual case. This suggests that in fact a much more compressed list of votes would have served Mr Norton's main purpose just as well. As he continues this work into the future I would urge him to put more emphasis on explanation and analysis and to present much of the factual record in tabular form. This might even have the advantage of getting the price of his work down to a level tolerable in the private rather than the institutional purchaser.

Nevil Johnson

Nevil Johnson is a fellow of Nuffield College, Oxford

Defence decisions

The Defence of the Realm in the 1980s
by Dan Smith
Croom Helm, £14.95
ISBN 0 85664 873 6

There is a deplorable lack of public debate on defence policy in Britain. Perhaps this reflects a consensus among civil servants, and military and political decision-makers on a policy that allows defence to be one of the few areas of public *expenditure* to be increased at the *present time*. But the policies that are laid down today will have effects lasting into the next century, so it is not the least merit of Dan Smith's book that he discusses defence in terms intelligible to both layman and expert. Although he clearly holds radical convictions this is for the most part a sensible account of the main issues.

Mr Smith discusses the nuclear deterrent, Nato and foreign policy, balanced armed forces and the defence budget, but neglects civil-military relations. As a well-known CND activist he argues predictably against any attempt to renew the nuclear deterrent when the present force wears out in the 1990s. But he points out that if such a renewal is to occur then the decisions have to be taken now. Indeed, they may have been taken already so that, as in the 1960s, a future Labour government will be able happily to implement decisions taken by a Conservative administration to the embarrassment of neither and the satisfaction of both. But surely the cost, the choice of partners, the delivery system, the implications for foreign policy and other parts of the defence budget, the moral question, and, above all, the consequences of the failure of deterrence cry out for public deliberation. Mr Smith provides an adequate summary of the arguments but fails to appreciate that an independent nuclear deterrent is a blunt instrument suitable only for bludgeoning in the unlikely last resort. But "the last resort" is precisely what most people care about and what they are willing to pay a high premium to prevent.

The second point that Mr Smith fails to acknowledge is that possession of nuclear weapons gives a firm foundation for an independent British foreign and defence policy whether within or without an alliance.

Without British (and French) independent nuclear weapons the super Powers could fight what, for them, would be a "limited" nuclear war in Europe, but which for Europeans would be tantamount to the holocaust. By their independent possession of nuclear weapons Britain and France could threaten to escalate to the strategic nuclear level and thereby hope to stay the hands of the Super Powers.

Mr Smith is clearly ambivalent about NATO. While he would like Britain to withdraw and to follow a non-aligned foreign policy he knows that there is little support for such an option. He therefore proposes a partial disengagement from the alliance on the lines of the French or Norwegian position. Britain should concentrate on conventional defence of these islands on land and sea and, to a lesser extent, in the air. The United States bases should be abolished and the continental commitment curtailed as far as possible. This is an attractive option, worth considering, especially if it would lead to substantial defence cuts, the military deindustrialization of Britain, a more independent foreign policy and a foreign economic policy emphasizing enlightened self-interest along the lines suggested by the Brandt Commission. Mr Smith encourages such thought besides giving an excellent review of some of NATO's problems. However, he fails to appreciate the remarkable aspects of the alliance: its longevity and extent of willing cooperation.

Whether in or out of the alliance, or merely disengaged from it, the cost of new weapons systems to fulfil familiar functions is rising. Mr Smith demonstrates that, even discounting inflation, it will cost more to do the same. British commitments are forever outstripping the resources available, no matter how drastically these commitments are cut. Apart from the continental commitment and the presence in Northern Ireland the possibilities for geographical cuts are virtually exhausted. We are thus faced with relinquishing the idea of balanced forces. The Navy has a clearcut role in defending islands and policing oil fields but many defensive tasks performed by airforces call how be handled from land or sea. Severely cut the RAF might no longer merit an independent existence. With new technologies, the conventional war-fare advantage on land and in the air swings in favour of the defender and thus the Army can adopt a strong static defence posture and possibly a more militia-type orientation and so too can the French and West German armies. Thus the continental commitment could be greatly curtailed to essentially a political gesture. The alternative, as Mr Smith demonstrates, is dangerous over-commitment or a huge increase in the defence budget in real terms.

It is clear that there is much to discuss and Mr Smith's book is an informative, provocative and reasonably fair account of most of the major issues. The great lacuna is the deliberate abstention from discussing civil-military relations and his greatest failing a surprisingly unimaginative discussion of disarmament and arms control.

A. J. R. Groom

Dr. Groom is reader in international relations at the University of Kent

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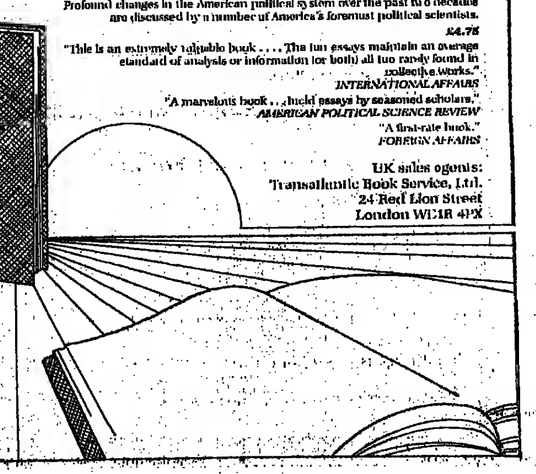

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Rules of the election game

The Presidential Contest: With a guide to the 1980 race
by Richard A. Watson
Wiley, £2.80
ISBN 0 471 05642 1

Thanks to the Brookings Institution, the American Enterprise Unit and other benign sponsors, there now abound detailed studies of that unique combination of chess, poker and astrology known as the American presidential election. This book is not one of them; rather, it is a manual which concisely covers, in logical sequence, the rules, the campaigns and the voting for both the nominating and electoral stages. Here, as to speak, are the board and the pieces, the rules and the chips, together with some exemplary gambits and end-games. The author's personal evaluation of the game occupies a mere 15 pages, but he appends a handy 30-page guide to the current 1980 contest.

What are the virtues of this primer? First, it accords the weight due to the nominating process: overdue, one might say, since it is this phase of the struggle that increasingly attracts public attention. Whereas fewer and fewer Americans vote in the final election—only 54.4 per cent of those eligible in 1976—the number of these participating in presidential primaries had more than doubled (from 12 million to 26 million) over the previous eight years. Such beauty contests, the author suggests, are now the recourse of three fifths of the states not least because the parties' regulations for the conduct of the caucus/convention method make that alternative mode of selection too complicated.

When their favourite has not won the nomination, does this "selectorate", then, lose interest? Is the whole business too protracted, too elaborate? Mr Watson is not sure. While applauding in principle the increased "democratization" of the winnowing process, he detects excessive personal, as distinct from (say) regional, coverage by "pack journalism", and fears that too much of the influence wrested from the party professionals has passed not to the amateur but to the media.

A second virtue is that this author's information really is up to date. He steers us confidently through the complicated series of recommendations whereby three successive Democratic committees recently rewrote the rules governing the composition of their party's

Republicans meeting for like at their national convention in 1952.

national convention. Reshaped almost beyond recognition, the convention is now a body compiled with great reverence for both electoral fractions and social categories. Yet, as their choice of McGovern showed in 1972, the Democrats may remain just as much at risk as their comparatively unreformed rivals (remembering Goldwater's fate in 1964) if they thereby produce a standard-bearer whose unacceptability to rank-and-file supporters provokes mass defection.

Up to date also is the book's treatment of the money problem. In the past decade federal laws governing campaign expenditures and contributions—a nice but important distinction—have been amended and remade. These extremely complicated episodes of amending and rewriting, in one of which the United States Supreme Court itself was involved, have made public funds conditionally accessible to the presidential contestants; fully so in the general election, partially in the primaries. Of this novelty both Carter and Ford availed themselves in 1976, with consequences which are still debated.

One does not lightly criticize a political process which has conveyed to the White House some excellent men and very few units. Nevertheless Mr Carter's original campaigning slogan, "Why not the Best?", deserves the most literal scrutiny. Why not indeed? Richard Watson, like other observers, wants radically to purge the electoral college ritual of its bizarre distortions while preffering the more cogent reasons for stopping short of a single national primary. Here is one weakness in a system which, after all the quadrennial ballyhoo, looks like leaving Americans in 1980 with no final alternative to the incumbent but a near-septuagenarian entertainer who has been "available" since the late 1960s. If the United States President be indeed the leader of the free West, dare one suggest that they might save themselves a moll of trouble and expense by ramitting the whole problem of selecting him to our Europeans?

Vivian Vale

Vivian Vale is lecturer in politics at Southampton University.

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America's political processes

The American Political Process
by Alan R. Grant
Heinemann, £6.50 and £3.95
ISBN 0 435 83358 3 and 83356 1

The Nature of American Politics
by H. G. Nicholas
Oxford University Press, £4.50 and £1.95
ISBN 0 19 289107 3 and 219121 7

Alan Grant has written a standard textbook introduction to American politics. In its simplicity and clarity of presentation, in its awareness of current issues and developments, and in his skilful use of illustrations and diagrams, it is likely to prove a valuable source of information for many new students of the subject. The author follows the most familiar subject divisions of American Government texts, gives good general descriptions of American political institutions and includes details of changes in the system up to 1978. Each chapter, too, contains a comparative analysis of corresponding elements in the British political system.

Grant may have defined his readership too widely. The scope and presentation may make the book more useful for students in schools than in higher education. First, there is a perhaps inevitable preference for detail at the expense of analysis. This can be well illustrated from the sections on elections and parties. A generally accurate description of the details of public financing of presidential elections begs important questions, both about the principle itself and the likely practical effects.

The discussion of the new rules and strategies involved in national convention delegate selection surely demands more comment on their implications for party democracy and political representation. The

ture; there is disappointingly little reference to major recent studies of electoral behaviour in assessing voter decisionmaking, and important party development studies are ignored when Grant evaluates the history of the American party system.

The tendency for factual openfeeding, combined with the sometimes excessively elementary comparative discussion on the political systems of the USA and the UK, may lessen the book's potential for success at university level. It delivers the information but lacks unifying interpretative themes. We should be told more of the American "historical, cultural, constitutional and social experience", which Grant recognizes is central to an understanding of the nature of the American political process. In assessing America's road from the Declaration of Independence to present-day political realities, the book accordingly gives us signposts for the route but no explanation for its direction.

H. G. Nicholas offers us a refreshingly stylish and accomplished "extended essay" that does indeed attempt to explain the distinctive (and often costly) characteristics that make American government possible. In view of the familiar and extreme difficulties of size, diversity, immigration, subordinacy of politics and antigovernmentalism, which the first chapter discusses, it may well be true that the survival of the American Constitution through 200 years is indeed "one of the most remarkable evidences of the democratic faith".

The price of the federalism that has made the United States possible is indeed a high one, and this book examines its implications overall for the respective roles, powers and interrelationships of the major institutions of American democracy. Nothing comes free in politics, the author argues, and this certainly seems true of so many of the elements of American democracy. The Supreme Court, for example, can be seen as a super-legislature, its value political expediency so highly, and yet it offers essential qualities of continuity and accountability. The non-ideological political parties, which apparently seek to be "most things to most men", are still, in many senses, both national and unifying, a binding force in the constitutional system—by becoming less so.

The electoral system, though unable to resolve crises in the governing process, still has a unifying quality—if only at a ritualistic and symbolic level. Congress, a coordinate government without an overall view of governmental policy, can still be its dispersion and fragmentation of internal political power, be a check on potential government. The tendancy, too powerful perhaps, but remote and potentially bolstered certainly, as the elective monarchy of American democracy can still lead and inspire beyond party to personality.

Nicholas finally considers the style of American politics and its regional, ethnic, cultural and organizational bases. He concludes with an assessment of the increasing burdens imposed by the new technological and mass media emphases of political campaigning in the modern era, which introduce new challenges for the American political system. Nicholas is optimistic that the United States can find those able to meet them.

Robert Templeton

Robert Templeton is lecturer in the department of politics at Edinburgh University.

Fascism

Italian Fascism and Developmental Dictatorship
by A. James Gregor
Princeton University Press, £15.20 and £5.40
ISBN 0 691 05286 7 and 10062 9

A. James Gregor is professor of political science at the University of California, Berkeley, and has written several books relating to the phenomenon of fascism. In this volume he has developed certain themes alluded to in his *The Fascist Persuasion in Radical Politics*, published in 1974, as well as introducing a number of new ideas. Professor Gregor is no stranger to controversy and both supporters and opponents of his ideas and analytical framework have once again been given plenty to consider.

The author's principal thesis is that Italian fascism was not a furious and isolated eddy in Europe's historical development but that it had much in common with radical and revolutionary systems, including those described as Marxist. It is hard to imagine that this viewpoint will be readily received by historians, economists and sociologists of the Left, as its acceptance would totally disorient them from all the familiar telegraph poles by which they distinguish the existence of their chosen road.

It is still more unfortunate for the Marxists and their sympathizers that Professor Gregor has been at such pains to meet all likely counterarguments with such a devastating weight of evidence and sharpness of analysis. Such trivial considerations will no doubt be ignored by the slavish devotees of neo-Hegelian historicism, who are fortunate enough to be able to proceed not by the steady accumulation of facts but by a *parti pris* method which might in different circumstances be described as divine revelation.

The first two chapters are devoted to an examination of the Marxist and syndicalist heritage in Italy, and this is followed in the next two chapters by an analysis of the essential components of Italian *national* socialism and fascism. The relationship between the theories of fascism, syndicalism and Marxism is described in detail and thoroughly catalogued. The author has concluded that: "Fascism was the heir of a long intellectual tradition that found its origins in the ambiguous legacy left to revolutionaries in the work of Karl Marx and Friedrich Engels.

"Fascism was, in a clear and objective sense, a Marxist heresy." Several interesting comparisons are made between the ideas and actions of Mussolini and his supporters, 1912, and those of Lenin and his followers in the same period. For example, attention is drawn to similarities between the "one man man-ship authority" urged by Lenin and the imposition of discipline advocated by Mussolini; these comparisons are then placed in the historical context of the evolution in such countries of one-party, authoritarian states.

The book, however, is not merely an inspection of the more theoretical aspects of the links between Italian fascism and the ideologies of the Left. The author has also devoted a great deal of attention to fascinating study of Mussolini's policies economic, social and labour relations, to the orchestration of propaganda and, finally, to an analysis of fascism and development in a comparative perspective. The chapter on consensus provides important information on the use made by a particular regime of mass mobilization and mass psychology to advance its control, just as Speer's *Inside Third Reich* gave insights into similar methods in Germany.

Let it be Professor Gregor's analysis of the theory and practice of the fascists in the sensitive areas of economic and labour policy which provide the historian with a new perspective. The chapters dealing with these matters have been thoroughly well-researched and thoroughly documented and certainly show that Italian fascism in many of its most important aspects, be considered as both revolutionary and developmental. Political, intellectual, political and economic history should be grateful to the author for presenting them with such a challenging and penetrating review of old assumptions.

Paul M. Hayes

Paul Hayes is a fellow of Keble College, Oxford.

Gramsci's message

Gramsci and Marxist Theory
edited by Chantal Mouffe
Routledge & Kegan Paul, £9.50 and £5.95
ISBN 0 7100 0357 9 and 0358 7

Gramsci's Politics
by Anne Showstack Sassoon
Croom Helm, £12.95 and £5.95
ISBN 0 7099 0326 X and 0344 8

Gramsci and the State
by Christine Buci-Glucksmann
translated by David Fernbach
Lawrence and Wishart, £14.00
ISBN 0 85315 483 X

All three of these books are substantial contributions to an understanding of the complex and subtle thought of Antonio Gramsci.

Following the neo-structuralist interpretation of Marx which dominated in the 1960s, the last decade has seen Gramsci emerge as the most influential source for Western Marxism. In the 1950s and early 1960s neo-structuralist Marxists sought to harmonize Marxist thought with the apparently organized and passive nature of advanced industrial society in which both the working class and the bourgeoisie had lost their self-confident sense of mission. Revolutionaries tended to look to the third world as the weakest link in the imperialist chain and the best hope for radical change.

The pregnant obscurity of Gramsci offered guidelines for analysing and transforming Western society which were closed both to the static approach of the Althusserians and to the neo-Hegelianism of the Frankfurt School. Both of these, while opposed in their philosophies, were seen as sharing an emphasis on theory that allowed for no practical issue. A more immediate reason for the growing attention given to Gramsci has been the rise of Eurocommunism. The protagonists of Eurocommunism, particularly in the Italian Communist Party (PCI), have claimed that their attempts to achieve the transformation of capitalism in socialist directions by basically peaceful means within the constitutional and legal framework provided by bourgeois democracy, are grounded in the work of Gramsci.

He has been called the theoretician of the (ideological) superstructure rather than of the (economic) base, and the Prison Notebooks written between 1929 and 1936 explore themes which appear to lend support to the Eurocommunist perspective: the extended rule assigned to intellectuals, the emphasis on the concept of hegemony, and the resulting differential strategies for revolution in the East and in the West. These three commentaries share this perspective, but are written from a "left" Eurocommunist point of view—being anxious to guard against what they see as the danger of a dilution of Gramsci's message in the interests of political expediency.

Chantal Mouffe has produced an extremely useful collection of eight articles which embody many of the most important contributions to the debate on Gramsci in Italy and to a lesser extent in France. Although the sometimes rather obscure style (which is badly served by the standard of translation) means that the context is not always accessible to the Anglo-Saxon reader, these essays are well worth perseverance.

Rightly set at the beginning is Norbert Bobbio's classic essay in which he claims that, within a Marxist framework and with careful reservations, Gramsci reworses the real results, Gramsci reworses the relations between structure and superstructure that had obtained in Marx—a view which is than criticized by Jacques Texier. Mouffe herself, who also supplies a clear introduction to the whole, has an illuminating piece on hegemony and ideology in Gramsci. The last section contains expositions of the relation of Gramsci to Leninism and a trenchant essay by Massimo Salvadori on the current strategy of the PCI.

Slightly more accessible to the average English reader is Anne Showstack Sassoon's *Gramsci and Politics*, which, although concentrating on the *Prison Notebooks*, also deals with the Turin period and the early 1920s. There is a welcome emphasis, throughout on the biographical context of his writings. For the context of his writings. For the central concept is hegemony, but its main location is not seen as cultural (as it is for many English commentators) but as essentially political. "It is Gramsci's concept of the State, in particular those manifestations of class rule which he calls hegemony, which defines his concept of politics and consequently the task of the party".

All three authors are united by their concern for politics and, in particular, for the state. Marx's legacy has provided very little indication of how he would have dealt with this theme, and subsequent attempts to remedy the lacuna have provided the most significant recent growth point in Marxist analysis. Undoubtedly the most substantial contribution is that by Christine Buci-Glucksmann, *Gramsci and the State* was first published in French five years ago and is to be strongly recommended. It centres, with great originality, on Gramsci's concept of "passive revolutions" within capitalism as a process intrinsic to the often very successful efforts of capitalism to restructure itself.

The heart (and mind) may well sink on learning from the author that her intention is to produce a "double symptomatic reading" of Althusser and Gramsci. This does produce difficulties in the more abstract first one last sections; but the centre of the book, dealing with Gramsci and the International (particularly Bukharin), his views of fascism and his attempts to produce long-term responses to the problems of the workers' movement of his time, is much more accessible.

The *Prison Notebooks*, written between 1929 and 1936, are undoubtedly Gramsci's major theoretical achievement. They are, however, noterlessly difficult to interpret, for several reasons. As notes not intended for publication they are often elliptical and discontinuous; Gramsci is expressing novel concepts in the language of Croce or Machiavelli; being written in prison, they are often intentionally vague and allusive in order to get past the censorship; and finally they have been subject to the most diverse interpretations providing ammunition for both supporters and critics of the recent "historical compromise" of the PCI. These three commentaries can all be recommended for throwing considerable light on the contributions of Gramsci who, with the exception of the Russian revolutionaries, has been the most original Marxist thinker of the past 50 years.

David McLellan

David McLellan is professor of political theory at the University of Kent, and his latest book is "Marxism after Marx".

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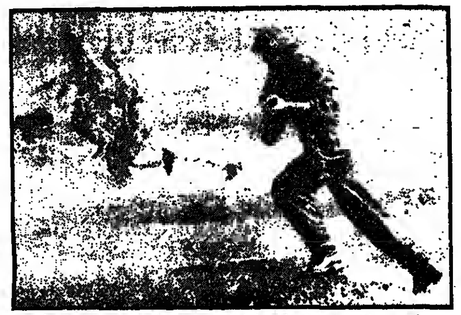
ISBN 0 7129 0890 0

Nobody has yet devised an alternative to the role of armed force that could conceivably work in the kind of world we live in. True, particular disputes can be resolved without recourse to violence, but across the world, in all countries and in all social systems force, the capacity for it, the threat of it and the use of it, are the dominating factors in the resolution of disputes. In sum, a violent solution is not inevitable, and a non-violent solution is sometimes possible, but in the overwhelming majority of cases, (for twenty thousand years and more), violence is the most likely outcome.

Eide and Thee's *Problems of Contemporary Militarism* is a collection of papers from the "peace community" which ought to carry a warning that the reader's credulity is likely to be tested. Not one of the 19 papers faces up to the book's central thesis, "Ours is a sick society", writes Thee. "One sympton of the sickness is the spread of militarism and militarization around the globe". One would expect from such a global perspective that the contributors would address themselves to first showing why in their view militarism is unique to our times (which it is not); second, why it is universal in both capitalist and socialist societies (which it is), and third, what produces it in all social systems and at all levels of development (which we do not know enough about).

What the unsuspecting reader gets is a highly selective account of militarism in *western* societies and the *non-communist* Third World. The only references to the phenomenon of militarism in socialist societies are a silly assertion by Michael T. Klare that militarism is "obviously most pronounced in capitalist societies" because of the "profit motive" and a misleading paper entitled "The Critique of Militarism in Soviet Studies", by Julian Lider, which is in fact a Soviet critique of militarism in the West. Its author presents the Soviet view without critical comment and Richard Falk does not dispute it because he defines militarism as: "anti-Soviet, anti-Communist in world view", which allows him to lump Communist China among "Right-Wing militarist" regimes.

Klare's essay "Militarism: the issues today" notes that "the military tend to impose hierarchic forms of decision-making on all government institutions, and to place all other institutions—the *press*, schools and colleges, the church, trade unions, peasant organisations—under central state control. Any institutions, social groupings, organizations or individuals which resist such control are considered a threat to national security and are forcefully dissolved, restricted, purged or neutralized by state agencies. Non-conforming ideas, values, religious or political beliefs, artistic styles or ethnic identities are considered subversive and adherents thereof are punished accordingly." To anybody but a contributor to this volume, there would be an almost perfect description of the aftermath of a communist war or coup in a developing country. Does the experience of Cuba, Ethiopia, Yemen, Cambodia, Vietnam, North Korea, China, Afghanistan or Angola contradict it? If the institutional and economic consequences of military and military communist regimes are the same—forced march development—then they should be researched as part of the same phenomenon.



Russian troops of the Tamonskaya division simulating battle on a burning obstacle course near Moscow.

William Eckhardt suggests that research into communist militarism "should be done by researchers living in these worlds, using their own methods and procedures in order to obtain the most meaningful results for their cultures". That is probably the most disgraceful statement in the whole book; any contributor claiming any semblance of scientific integrity must repudiate it without qualification.

Eide writes that "it has been claimed that in non or low-industrial countries (the category in which most Third World countries find themselves) the armed forces contribute to the economic development of the country concerned". He calls this a "myth" but accepts it has "a core of truth". He cannot do anything else because the empirical research supports the "myth". Benoit showed this back in 1973. He wrote then: "The big surprise . . . was the finding that the evidence does not indicate that defence has had any net adverse effect on growth in developing countries." David Whynes in his book shares Benoit's integrity in facing up to the evidence although he appears to sympathize with the disarmament option.

The Economics of Third World Military Expenditure is a well-written summary of the empirical evidence about defence spending in Third World countries—though six years after Benoit's study Whynes might have extended his vision to the socialist countries who have played a more prominent role in war (between each other) and in direct intervention (Cuba in Angola, Ethiopia). He does look in detail at "military policy by development" with respect to Indonesia, China and Tanzania, and this is a most welcome contribution to defence studies.

Marwah and Pollack, in *Military Power and Policy in Asian States*, provide an entirely different collection of essays which can be read for their insights into the areas of national defence interests of three very different countries, China, India and Japan. I liked Pollack's essay, "China as a Military Power", the most interesting. Much of China's foreign policy in the years since 1949 makes sense once it is appreciated that the "Ping ground forces remain woefully deficient (in comparison with the potential adversaries). In overall firepower, in the extent of modernization and other factors controlling effective infantry operations and are subject to the vulnerability of Chinese logistic systems".

China's hostility to Russia is founded on fear of what their northern communist neighbour has the capability of doing if it chooses to intervene in Chinese affairs. The Russian invasion of Afghanistan is for Peking, but another turn of the screw. China's armed forces are largely geared for *in situ* defence. Their strike capacity outside the role is severely limited. They are no match for a mechanised opponent, nor can they sustain a long drawn out campaign beyond their borders. From this structural weakness, the turn towards the military relationship with America and NATO Europe is perfectly explicable. The fact that Russia can sustain such a military campaign, and has the capacity for long distance intervention, both directly on its own account or through surrogates (Cuba and Vietnam), is a sobering thought.

Gavin Kennedy

Gavin Kennedy is senior lecturer in economics at the University of Strathclyde.

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The author identifies the Soviet Constitution of 1977 as the most important change of the decade in the conduct of Soviet government, and includes its official translation in this 5th edition of his book. He also examines the new law of the Council of Ministers, the updated Communist Party rules, and excerpts from the English translation of the Communist Party program of 1961, now in force. 344 pages, cloth £12.00, paper £3.60.

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Introducing Marx

Marx
by Peter Singer
Oxford University Press, £3.50 and 95p
ISBN 0 19 287511 6 and 287510 8

Professor Singer's short book is intended to provide a "good brief introduction" to Marx's thought. It is a fair-minded and competent exposition of Marx's views on such subjects as alienation, history, capitalism, the proletariat and communism.

Singer examines Marx's major works in the order of their publication and summarizes their central theses. And in spite of limitations of space he generally manages to mention and comment on the basic issues that are raised. The chapters on economics and communism in which he discusses respectively Marx's critique of capitalism and conception of the communist society are especially useful. In the final chapter Singer concludes that although Marx was a poor social scientist most of whose predictions have proved false, he was a good philosopher who offered "penetrating" insights into the nature of freedom and the historicity of human nature.

Even when full account is taken of the fact that Singer's book is only a brief introduction, it is inadequate in several important respects. First, although he is a good and respected philosopher he is, like Acton and Plamenatz, not at home within the philosophical tradition of Hegel and Marx and makes several extremely odd remarks. It is a caricature to say of Hegel that he takes "mind" to characterize the "spiritual side of the universe" or that his conference to the spirit's self-alienation only means that "people take other people as something (sic) foreign, hostile and external to themselves". It is equally odd to turn Marx into a metaphysician and claim that his historical materialism is a theory about, among other things, "the nature of ultimate reality" or that for him the "productive life of human beings . . . is ultimately real".

Second, like G. Cohen and other recent writers, Singer accepts the view that Marx was a technological or rather productive-force determinist. Predictably like them he too ends up enthropomorphizing, even deifying the productive forces. The latter are said to "assert themselves" against all opposition, dictate and determine the pattern of history, "select" suitable institutional vehicles, and so on. It is a sad paradox that those who insist on interpreting Marx as a scientist should turn him into an animist for whom the productive forces possessed of the miraculous powers of choice will pilot human history. It is no less paradoxical that those who radically detach Marx from Hegel should conceive the productive forces so that materialist counterpart of Hegel's Geist and turn Marx into a materialist Hegel.

Finally, although Singer rightly emphasizes the importance of Marx's theory of freedom, he does not appreciate its profound implications. For Marx as for Hegel freedom consists in self-determination and ultimately in self-creation, the highest level of self-determination. Accordingly he argues that men becomes fully free only when all that he is and has is his own free creation. This view informs much of Marx's thought and is the source of both his strength and limitations. Since freedom is self-creation, nature which is by definition given and not man-made becomes the antithesis of freedom. Hence Marx's passionate concern to conquer nature, as reflected in his emphasis on technology and his desire to "abolish" or drastically reduce the natural differences of race, intelligence, and so on. Further, since Marx takes freedom to be one of man's essential characteristics and understands nature as its antithesis, he does not and cannot have a theory of human nature. For him men begins history endowed with a nature, but increasingly sheds it and becomes a free and self-created being. To put the point differently, Marx has no theory of man, but it is not a theory of human nature for he does not conceptualize man's *differentia specifica* in natural terms, like many other commentators. Singer fails to see this, and hence misses out some of the basic features of Marx's thought.

Bhikhu Parekh

Dr Parekh is reader in politics at Hull University.

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BOOKS

Atomic architecture of solids

Structure and Bonding in Solid-State Chemistry
by M. F. C. Ladd
Ellis Horwood/Wiley, £18.00 and £6.95
ISBN 0 85312 095 1 and 103 6

The author of this volume has set himself a task of considerable difficulty. This is to present to undergraduate students in the physical sciences a treatment both of the way atoms arrange themselves in solids and an explanation of this architecture in terms of the spatial distribution of the electrons. It is true to say that in such a treatment, one must appeal to a very wide range of concepts in both physics and chemistry. This makes the author's subject at once very appealing and also very difficult to present to undergraduates.

The atomic arrangements in solids are treated well, with pleasing emphasis on many modern examples. Thus, we are not simply told the facts about crystalline sulfids (and how they are established) but we are made aware of the interest in the amorphous and glassy state, in which only the local bonding remains relatively intact but the lattice order of the crystal is lost. This is as it should be, for we now know what the early pre-occupation with the properties of lattices, rightly reflected in the Brillouin zone classification of electron levels and lattice vibrational frequencies, nevertheless tended to mask the importance of local atomic environment as a matter of great significance in condensed matter. Thus, coordination number, local chemical bonding, molecular units, and so on, are now known from our increasing understanding of solids without long-range lattice ordering to have crucial role to play. In addition, crystalline but defect solids, with missing atoms or atoms in interstices, have also tended to bring home the same message. Thus, in the discussion of the solid state, the chemical view has certainly come back into the centre of the stage, where pioneers like Linus Pauling had always believed it should be.

The writer has tried to make his book relevant to such modern trends—he refers to amorphous and defective solids, and there is also a brief but useful place on the liquid crystal state which can arise in the case of large elongated molecules. Ladd has been bold in his coverage and that is, of course, commendable. Thus, the discussion of ionic crystals, of Frenkel and Schottky defects, and of the Debye-Hückel theory is the kind of basic background needed to understand the area, showing technological promise of fast ion conductors. Naturally enough, Ladd does not include this latter topic explicitly, but he does deal with diffusion of ions via defects along with the necessary background.

The supplementary reading suggested is well chosen, and many of the problems are stimulating and useful. In case the above emphasis on some of the newer areas should be misinterpreted, there is a nice balance between the old and the new—the chemists' concepts of electronegativity, electron affinity, and so on, finding their proper place.

Having said all these very positive things about Dr Ladd's book it must be added that when one comes to the second area he tackles—the explanation of the atomic architecture of the solids in terms of the distribution of electrons in space—he has not fully solved the very difficult problems of presentation that his subject poses. Thus, the way he introduces the Schrödinger wave function, the probability interpretation of it, and the necessary mathematics underlying the treatment, can be criticized. The undergraduate will find the wave function and its probability interpretation on page 1 of chapter 1, with a reference to further discussion on page 152. He will find Slater's rules for calculating atomic sizes in an appendix on page 125 but he will have to wait until page 159 for a discussion of the wave functions of the hydrogen atom.

It is to be hoped, therefore, that if Dr Ladd's book reaches a second edition, he will have the chance to rethink the presentation of the background quantum theory and the treatment of electronic structure. He has clearly felt, from the outset, that the emphasis must be on the condensed state, and I would not quarrel with that view. But it has led him into some difficulties—in implementation and not in concept. I do not believe that a complete answer exists, but a re-arrangement of the treatment of wave functions and the omission of a few appendices of mathematics alone, would be helpful in any future revision.

N. H. March

N. H. March is Coulson Professor of Theoretical Chemistry at the University of Oxford.

Orthodox and well tried pattern

Physical and Mechanistic Organic Chemistry
by Richard A. Y. Jones
Cambridge University Press, £25.00 and £8.50
ISBN 0 521 22642 2 and 29596 3

This volume is the most recent addition to the useful and authoritative series of Cambridge Texts in Chemistry and Biochemistry, which are directed primarily at more advanced undergraduates and graduate students. The author first lays down the ground rules in six introductory chapters: structure and mechanism, kinetic studies, linear free energy relationships, acids and bases, the reaction medium, and molecular orbital methods. He then seeks to put the knowledge thereby acquired to work in explaining the behaviour of organic compounds in a range of different reaction situations. These comprise aliphatic nucleophilic substitution, elimination reactions, addition to carbon-carbon double bonds, aromatic electrophilic substitution, addition to the carbonyl group and related reactions, the hydrolysis of carboxylic esters, aromatic nucleophilic substitution, molecular rearrangements, and, finally, pericyclic reactions.

This is an orthodox and well tried pattern, and one's first question therefore is how successfully has it been exploited here? The overall answer is quite successful, although, as so often happens, the degree of sophistication achieved (and the space taken up) by the material in the introductory chapters is significantly greater than is subsequently required for the exploratory material that constitutes the meat body of the text. Having said that, it is equally true that the quality of the explanations offered is in general very satisfactory, and the choice of examples is also interesting, and sometimes quite unusual.

Dr Jones has obviously had to be highly selective in a book of this size. He has, as he says himself, "emphasized the heterolytic and homogeneous or the extreme of the homolytic and heterogeneous". This is a sensible choice—though radical reactions do perhaps merit a little more coverage than three or four pages!

The general effectiveness of the explanations of diverse aspects of reaction mechanism is much enhanced by the fact that Dr Jones writes well. He has also gone to a great deal of trouble over the layout of his pages, so that information that is often complex is clearly and tastefully displayed. The book is well documented, not only in terms of references to the original literature but also with numerous suggestions for further reading at the end of each chapter.

An obvious comparison is with *Mechanism in Organic Chemistry* by Alder, Baker and Brown (Wiley, 1971). Dr Jones's book is more orthodox and less imaginative than that one, but the student may well find it the easier of the two to get on with.

Peter Sykes

Peter Sykes is a Fellow of Christ's College, Cambridge.

The charm of thermodynamics

Chemical Thermodynamics
by M. L. McGlashan
Academic Press, £18.00
ISBN 0 12 482050 4

In style and level of treatment this is a worthy successor to Guggenheim's: *Thermodynamics* (Northiland, 1949). Unless they are switched to alternative courses modelled on the book, however, undergraduates will probably require a primer before appreciating its precision of notation and the import of its asides; but practising physical chemists without a personal copy will certainly wish to consult this book in the library. Apart from the useful problems at the end of each chapter, special features include the explicit introduction of the number of independent chemical reactions into the phase rule (enabling the number of components to be identified with the number of substances), the description of fluid mixtures, and the direct emphasis on the definition constant rather than the thermodynamic functions in terms of which it can be expressed. Mixes general readers will find entertainment in the expected attack upon "universal entropy" beginning on page 111 and in similar passages elsewhere.

The important difference from Guggenheim lies in the more integrated view projected of the experimental and theoretical aspects of the subject. In the author's own words, "The great charm of thermodynamics to me is that it can at best be both rigorous in the formulation of its algebra and rigurous in its experimental demands". Some consequent expansion is offset by leaving algebraic derivations as exercises for the reader. Although some teachers will, like myself, feel slightly chastened (caught out trying to explain entropy), the style is rather warmer than that of Guggenheim, who surely would not have mentioned the wager of a "jolly good dinner" (where the quotation marks presumably indicate that the concept is not well defined).

Occasionally a challenging point seems overdone. For example, any anxiety about the immeasurability of the temperature coefficient of the Gibbs' function of a phase could have been dispelled immediately by adding that it is the differences for two phases that are nevertheless defined and useful in discussing phase equilibria. Or again, one may at least question the virtue in preferring dimensionless "standard" equilibrium constants in the absence of a general agreement to express all physical equations in dimensionless "standard" forms. (I also forsee some resistance to dropping the standard Gibbs' function notation for reactions.) Whatever their views are on these matters, however, chemists must welcome such a well produced, authoritative work encapsulating the author's wisdom on grammar and spelling in the thermodynamic context.

P. A. H. Wyatt

P. A. H. Wyatt is Irvine Professor of Chemistry at the University of St Andrews.

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NOTICE BOARD

Noticeboard is compiled by Patricia Santinelli and Mila Goldie

Chairs

Dr Alan F. Newell, senior lecturer in digital systems engineering at the University of Southampton, has been appointed to the NCR chair of electronics and microcomputer systems in the University of Dundee. The chair has been established to provide the teaching of microprocessing to undergraduates, to coordinate work carried out by relevant university departments and to liaise with local industry, both by organizing courses and by advising them on the use of microprocessors.

Professor J. M. M. Cunningham has been appointed to the joint post of professor of agriculture in the University of Glasgow and principal of the West of Scotland Agricultural College. He will take up his duties on October 1, 1980, on the retirement of Professor J. S. Hall. Professor Cunningham is at present director of the Hill Farming Research Organisation and an honorary professor of agriculture at Edinburgh University.

The personal title of professor of international security affairs at the University of Birmingham has been conferred upon Mr Neville G. Brown, senior lecturer in the department of political science.

Dr Vido Carver has been appointed to a personal chair in health and social welfare studies at the Open University. Professor Carver joined the university nine years ago as a staff tutor in the London region, and became academic coordinator for health and social welfare courses in 1975.

Forthcoming events

The Adult Literacy and Basic Skills Unit is holding a conference on May 28 at Central Hall, Westminster, London SW1, designed to set the context in which the unit will operate and consider the further development of adult literacy and related basic skills work. The keynote address is to be given by Dr Rhodes Boyson.

* * *

"Adult Education and the Working Class" is a one-day seminar to be held by the New University of Ulster's Institute of Continuing Education on May 31 from 10 to 5 pm at Magee University College, Londonderry. Further details from Cathy Francis, the New University of Ulster Institute of Continuing Education, Londonderry.

Grants

Liverpool

Biochemistry—Dr R. J. Benyon—£21,840 from the SRC in support of his research into the mechanism of action of a new intra-cellular proteinase and its involvement in intracellular enzyme catabolism.

Civil engineering—Professor P. Holmes—£53,498 from the SRC as an additional equipment grant.

Electrical engineering and electronics—Professor J. D. Craggs, Drs M. T. C. Fang and M. R. Barratt—£15,750 from the SRC in support of their work on the theoretical modelling of gas blast circuit arcs particularly during the current zero period; £25,793 from the SRC in support of their work on the current zero arc behaviour in SF6 following severe nozzle blocking at very high currents; £34,335 from the SRC in support of their work on the influence of intense radiative power loss upon current zero arc behaviour in SF6 fed SF6 circuit breaker.

Genetics—Dr P. Strike—£36,919 from the SRC in support of his research into the error prone repair caused by bacterial plasmids.

Histology—Professor C. R. Hopkins, Drs C. Green and P. Shaterian—£36,717 from the SRC in support of their work on scanning electron microscopy-detailed surface topography and overall shape of eukaryote cells.

Inorganic, physical and industrial chemistry—Dr L. H. Sutcliffe—£11,050 from the SRC in support of his structural and chemical investigation of a new class of thiyl free radicals; Dr Sutcliffe and Dr A. G. Craven—£24,772 from the SRC in support of their research into on-line calibration

Open University programmes May 24 to May 30

Saturday May 24

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7.10 Principles of chemical processes: Vinyl Chloride Production (AT 293): prog 1.
7.40* The Enlightenment: Dinner at Baron d'Holbach's (A204): prog 16.
8.05* Modern art and the social institutions: art: styles and social institutions: images of the city (A263): prog 5.
BBC 2
7.40 History of mathematics: Points of View—Pythagoras and Proclus (AM289): prog 5.
8.00 The control of education in Britain: Implementing Taylor? (E232): prog 4.
8.30* Arts foundation course: Appearance and Reality (A210): prog 13.
8.55 Social psychology: You Don't Feel Like It (D306): prog 6.
9.20 Schooling and society: The Case of William Tyndale (E202, prog 3).
9.45* The handicapped person in the community: Life Other People (E251): prog 1.
10.10 Brunel: Warpack (A307): prog 61.
11.00 Earth science topics and methods: Part A: Landslips (S355): prog 11).
11.35* Oracles: Certainty, Inheritance in Parmenthia (B299): prog 7).
11.55 Methods of educational enquiry: an empirical approach: Interviewing (E341): prog 4).
12.15* Understanding space and time: Speed (S334): prog 7).
12.45* History of architecture and design 1890-1939: Hans Scharoun (A300): prog 16).
13.05* Conflict in the family: The Han's Dilemma, Wider and Wider (E304): prog 7).
13.20 Electrical computation: The Bridge and Round Method (M261): prog 5).
13.55 Mathematics foundation course: Mathematical Perspectives: Case Study—Catastrophe Theory (M101): prog 24).
14.20 An introduction to materials: Chosing a Material (T341): prog 7).
14.00* Student Exercise (D203): prog 15).
14.30 Linear mathematics: Normal Forms (M201): prog 8).
14.40 Twentieth century poetry: "A Borough Mind": Yeats and Eliot (A306): prog 1).
15.00 English urban history 1500-1780: Politics and the Religious Historians (A322): prog 4).
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15.40 An ageing population: A Continuum of Care (P323): prog 6).
16.10 Thought and reality: central themes in Wittgenstein's philosophy: Language, Truth and Logic (A304): prog 1).
16.40 Biological bases of behaviour: Brain Sleep and Consciousness (B171U06): prog 2).
17.00 Materials under stress: Looking at Fracture Surfaces (T351): prog 7).
17.40 The rise of modernism in music 1890-1950: Berg's Wozzeck: (A304): prog 11).
18.10 Telecommunication systems: Speech and Signalling in Telephone Systems (T341): prog 4).
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20.40* Schooling and society: The Case of William Tyndale, Part 1 (E202): prog 3).
23.50* The revolutions of 1848: Marx and 1848 (A321): prog 11).
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24.00* Linear mathematics: Normal Forms (M201): prog 8).
00.30 Nineteenth-century history 1815-1870: The Tories and the Religious Historian (A322): prog 4).
00.40* Open Forum: (E000): prog 8).

Sunday May 25

BBC 1
7.15 Systems modelling: A Model of Punctuality (T341): prog 4).
7.40 Computer analysis: Singularities (M332): prog 8).
8.05* Thinking about society: The Case of William Tyndale Part A (E202): prog 3).
8.30* Science foundation course: Equilibrium Rules OK? (S101): prog 14).
8.55* Mathematics foundation course: Mathematics in Social Perspective: Case Study—Catastrophe Theory (M101): prog 25).
9.20* An introduction to materials: Choosing a Material (T341): prog 7).
9.45* Principles of chemical processes: Vinyl Chloride Production (ST294): prog 8).
10.10* Physiology of cells and organisms: Milk (S291): prog 7).
10.35* Introductory electronics: Feedback (T263): prog 4).
11.00 The Christians and the Jews: the Jewish Response Bending Towards Me (R351): prog 4).
11.25* Materials under stress: Looking at Fracture Surfaces (T351): prog 7).
11.50 Twentieth-century poetry: "A Difficult Art": Yeats and Eliot (A306): prog 1).
12.15 Systems behaviour: A Local Government Model (T341): prog 7).
12.40 Modelling by mathematics: A Model of Population Growth (T341): prog 1).
13.05 Materials under stress: Sure Off Short Of Life (T351): prog 16).
13.30 Food production systems: Novel problems (T273): prog 4).
14.00* Student Exercise (D203): prog 15).
14.30 Linear mathematics: Normal Forms (M201): prog 8).
14.40 Twentieth century poetry: "A Borough Mind": Yeats and Eliot (A306): prog 1).
15.00 English urban history 1500-1780: Politics and the Religious Historians (A322): prog 4).
15.30 Methods of educational enquiry: an empirical approach: Research Ideology (2) (E341): prog 7).
15.40 An ageing population: A Continuum of Care (P323): prog 6).
16.10 Thought and reality: central themes in Wittgenstein's philosophy: Language, Truth and Logic (A304): prog 1).
16.40 Biological bases of behaviour: Brain Sleep and Consciousness (B171U06): prog 2).
17.00 Materials under stress: Looking at Fracture Surfaces (T351): prog 7).
17.40 The rise of modernism in music 1890-1950: Berg's Wozzeck: (A304): prog 11).
18.10 Telecommunication systems: Speech and Signalling in Telephone Systems (T341): prog 4).
Radio Scotland and Radio Cymru areas only
Alternative broadcasts
20.40* Schooling and society: The Case of William Tyndale, Part 1 (E202): prog 3).
23.50* The revolutions of 1848: Marx and 1848 (A321): prog 11).
RADIO 5 (VHF)
Alternative broadcasts for students in Scotland and mid-Wales only
24.00* Linear mathematics: Normal Forms (M201): prog 8).
00.30 Nineteenth-century history 1815-1870: The Tories and the Religious Historian (A322): prog 4).
00.40* Open Forum: (E000): prog 8).

Monday May 26

BBC 1
9.40 National income and economic policy: Fiddling and Fiddling (D884): prog 4).
7.05 Patterns of inequality: Low Pay (D302): prog 5).
7.30 International politics and foreign policy: The Domestic Sources of Foreign Policy—Israel and the Occupied Lands (D302): prog 4).
BBC 2
6.40 Telecommunication systems: Telephone Switching (T341): prog 8).
7.05 Quantum theory and atomic structure: Solutions to Schrödinger's Wave Equation (AM288): prog 5).
7.30 Linear mathematics: Dual Cones (M201): prog 10).
8.00 (VHF)
8.30 Control and stability in the development of modern Europe 1789-1919: Reactive 31 (A307): prog 8).
8.40 Modern art from 1848 to the present: styles and social implications: Impact of Cubism (A363): prog 8).
8.40 The development of instruments and their music: Harpsichord Development (A304): prog 8).
RADIO 4 (VHF)
23.20 Arts foundation course: The Ghent Altarpiece (A101): prog 15).
23.50 The Enlightenment: A Model of Despotism (A204): prog 15).
RADIO 3 (VHF)
Alternative broadcasts for students in Scotland and mid-Wales only
00.20 Mathematics, futures: design and technology: Technology and the Individual: Making Some Connections (T262): prog 2).
00.30 Microeconomics: Economics of Scale: The Cambridge Project (E241): prog 7).
00.40 Materials under stress: Looking at Fracture Surfaces (T351): prog 8).

Tuesday May 27

BBC 1
6.40 Fundamentals of human geography: Central Place Theory (G206): prog 8).
7.05 An introduction to the chemistry of carbon compounds: Conjugation: Aromaticity and the Electronic Spectra of Compounds (S254): prog 8).
7.30 Structures: Structures in Tension (T261): prog 8).
BBC 2
6.40 Environmental control and public health: Water Conservation: Quality of Polluted Water (P282): prog 8).
7.05 Science and the rise of technology since 1700: Technological Spin-off: Scientific Education (A072U): prog 8).
7.30 Survey of architecture and design 1890-1939: Adolf Loos (A306): prog 13).
8.00* Structures: Structures in Tension: Cables (T261): prog 8).
8.25 Mathematics, science and society: Plutonic Associations (S357): prog 8).
8.50 Mathematics, science and society: What has they ever do for us? (S357): prog 8).
9.15 The development of instruments and their music: Bagpipes (A304): prog 8).
9.40 Twentieth century poetry: "A Difficult Art": Yeats and Hopkins (A306): prog 1).
10.05 Thinking about society: The Case of William Tyndale Part A (E202): prog 3).
10.30* Science foundation course: Equilibrium Rules OK? (S101): prog 14).
10.55 Mathematics foundation course: Mathematical Perspectives: Case Study—Catastrophe Theory (M101): prog 26).
11.20 An introduction to materials: Choosing a Material (T341): prog 7).
11.45 Decision making in Britain: The Implementation Process (D301): prog 5).
12.10 Principles of chemical processes: Vinyl Chloride Production (ST294): prog 8).
12.35 Introductory electronics: Feedback (T263): prog 4).
13.00 Physiology of cells and organisms: Milk (S291): prog 7).
13.25 Materials under stress: Looking at Fracture Surfaces (T351): prog 7).
13.50 Food production systems: Novel problems (T273): prog 4).
14.20 Student Exercise (D203): prog 15).
14.50 Linear mathematics: Normal Forms (M201): prog 8).
15.00 Twentieth century poetry: "A Difficult Art": Yeats and Eliot (A306): prog 1).
15.20 English urban history 1500-1780: Politics and the Religious Historians (A322): prog 4).
15.50 Methods of educational enquiry: an empirical approach: Research Ideology (2) (E341): prog 7).
16.00 An ageing population: A Continuum of Care (P323): prog 6).
16.30 Thought and reality: central themes in Wittgenstein's philosophy: Language, Truth and Logic (A304): prog 1).
17.00 Biological bases of behaviour: Brain Sleep and Consciousness (B171U06): prog 2).
17.20 Materials under stress: Looking at Fracture Surfaces (T351): prog 7).
17.50 The rise of modernism in music 1890-1950: Berg's Wozzeck: (A304): prog 11).
18.20 Telecommunication systems: Speech and Signalling in Telephone Systems (T341): prog 4).
RADIO 3 (VHF)
20.20 Mathematics, futures: design and technology: Technology and the Individual: Making Some Connections (T262): prog 2).
20.30 History of architecture and design 1890-1939: Adolf Loos (A306): prog 13).
21.00 Failure of Total Design (A306): prog 14).

Wednesday May 28

BBC 1
6.40* Schooling and society: The Case of William Tyndale (E202): prog 3).
7.05 An ageing population: Childhood (P323): prog 4).
7.30* Computer Analysis: Singularities (M332): prog 8).
BBC 2
6.40 Systems Organization: the management of complexity: Who Do You Think You're Talking To? (T243): prog 3).
7.05 Physiology of cells and organisms: Fertilization and Implantation (B321): prog 8).
7.30 Biological bases of behaviour: Emotion: Hot Physiology and Psychology (B07286): prog 8).
RADIO 5 (VHF)
6.00 Twentieth-century poetry: "A Difficult Art": Yeats and Eliot (A306): prog 1).
6.20* Thinking about society: The Case of William Tyndale Part A (E202): prog 3).
6.40 Science foundation course: Equilibrium Rules OK? (S101): prog 14).
10.30* The Enlightenment: A Model of Despotism (A204): prog 15).
11.40* Twentieth century poetry: "A Difficult Art": Yeats and Eliot (A306): prog 1).
RADIO 4 (VHF)
23.30 Cognitive psychology: Are Psychic Phenomena Relevant to Cognition? (D303): prog 5).
23.50* The rise of education in Britain: Grants—Effects on Control (E232): prog 5).
RADIO 3 (VHF)
Alternative broadcasts for students in Scotland and mid-Wales only
24.00* The rise of modernism in music 1890-1950: Berg's Wozzeck: (A304): prog 11).
00.40* Telecommunication systems: Speech and Signalling in Telephone Systems (T341): prog 4).

Thursday May 29

BBC 1
6.40* The control of education in Britain: Implementing Taylor? (E232): prog 4).
7.05 Reference and Information: Reference and Before Copernicus (A000): prog 8).
7.30 Arts foundation course: The Ghent Altarpiece (A101): prog 16).
BBC 2
6.40 Introduction to pure mathematics: The Dodecahedral Group (M203): prog 10).
7.05 The digital computer: Computer Peripherals (T262): prog 8).
7.30* Systems performance human factors and problem solving: Sailing Boat Rolling (T3342): prog 8).
8.50* Drama: Strange (A307): prog 8).
11.40 Economics and education policy: Doctors—Too Few or Too Many? (E241): prog 8).
18.05* Environmental control and public health: Water Conservation (P282): prog 8).
22.50 The Enlightenment: A Model of Despotism (A204): prog 16).
RADIO 3 (VHF)
Alternative broadcasts for students in Scotland and mid-Wales only
24.00* Mathematics, futures: design and technology: Technology and the Individual: Making Some Connections (T262): prog 2).
00.20 Microeconomics: Economics of Scale: The Cambridge Project (E241): prog 7).
00.40 Materials under stress: Looking at Fracture Surfaces (T351): prog 8).

Friday May 30

BBC 1
9.40 Oceanography: Where the River Meets the Sea—Visit to the Tay Estuary (S354): prog 10).
7.05* Food production systems: Novel Problems (T273): prog 4).
7.30 The nature of chemical reactions: Rearrangements (S341): prog 10).
BBC 2
8.40 Art in Italy 1400-1550: The Villa Farnesina (A362): prog 6).
7.05 Reference and information: Fine Art to Artefact (P4361): prog 8).
7.30* Systems behaviour: A Local Government Model (T341): prog 8).
RADIO 3 (VHF)
6.00 Mass Communication and society: The Partial (D3253): prog 8).
8.20* An ageing population: A Continuum of Care (P323): prog 8).
8.40* Telecommunication systems: Speech and Signalling in Telephone Systems (T341): prog 4).
19.20* The handicapped person in the community: The Management of Influence (P341): prog 4).
19.40 Industrial relations (P385): prog 6).
RADIO 4 (VHF)
18.30* Making sense of society: Evaluating Arguments (D101): prog 15).
RADIO 3 (VHF)
6.00* Patterns of inequality: Caring Care: Access to Education (D302): prog 10).
8.20 Problems of inequality: Caring Care: Access to Education (D302): prog 10).
8.40* Greece 478BC to 338BC: Science (A263): prog 1).
18.20* Research methods in education and the social sciences: Valentine for Brides: A Behavioural Account (E304): prog 7).
19.40* Mathematics foundation course: Foundation Maths 8 (M101): prog 8).
RADIO 5 (VHF)
23.30* Twentieth-century poetry: "A Difficult Art": Yeats and Eliot (A306): prog 1).
23.50* Non-medical failures: design and technology: Technology and the Individual: Making Some Connections (T262): prog 2).
RADIO 5 (VHF)
Alternative broadcasts for students in Scotland and mid-Wales only
24.00* Mathematics foundation course: Foundation Maths 8 (M101): prog 8).
00.30* Student Exercise (D203): prog 15).
00.40* Biological bases of behaviour: Brain Sleep and Consciousness (B171U06): prog 2).

* repeated programmes

COURSES

ECOLE DES AFFAIRES DE PARIS

(Paris Management School)

Three-year business management programme in France, the United Kingdom and West Germany

The Ecole, the youngest of the French Grandes Ecoles de Gestion, has some places available for British university graduates for its 1980-1983 course, starting mid-September, 1980.

Entry is by way of the Concours entrance examination, with fluency in French, adequate numeracy and, preferably, a sound working knowledge of German.

Further information is available from the Director, Ecole des Affaires de Paris, 17 Merton Street, Oxford OX1 4JH.

INDUSTRIAL SPONSORSHIP IN SCHOOLS, UNIVERSITIES AND POLYTECHNICS

HOTEL RUSSELL

16 JULY 1980

An important day conference to outline and discuss industrial sponsorship for education. Among the topics will be the sponsored student; research contracts; business and management schools; vocational course sponsorship; help for schools and short courses.

The speakers include Mr. Robert Rhodes James MP; Mr. K. J. Johnson, Director, Dunlop; Professor David Sharp, Glasgow University; Professor P. F. Moore, London Business School; and senior managers from industry—Esso, BP, IBM, Metal Box, the Post Office and other companies.

An essential conference for industrial and educational staff concerned with sponsorship in all its forms.

For conference details, write to or telephone CRAC (Careers Research and Advisory Centre), Conference Office, Bateman Street, Cambridge. Telephone: 0223 69311 ext. 28.

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Universities

UNIVERSITY OF THE SOUTH PACIFIC

Applications are invited for the following posts:

1. SENIOR LECTURER/LECTURER IN EDUCATION (ENGLISH METHODS) (POST 80/30) tenable from January 1981. Candidates should have at least a masters degree in the teaching of English as a second language. The appointee will be required to train teachers of English in secondary schools for the University Region. A post-graduate certificate of Degree in Education is desirable as the position requires substantial experience in teacher education at Diploma and Degree levels. Candidates should indicate their special research interest in the problems of language teaching and learning in bilingual situations. The appointee may be required to supervise graduate students in their research in the problems of teaching English as a second language in the University Region.

2. SENIOR LECTURER/LECTURER IN EDUCATION (POST 80/31) tenable as soon as possible. Candidates should hold at least a master's degree in education or psychology. Preference will be given to those with a doctorate, and with teaching experience. The appointee will be expected to contribute to the teaching of Educational Psychology, Educational Assessment and principles and practice of classroom learning and to assist in the general supervision of secondary student teachers at both degree and diploma levels. The appointee may also be expected to participate in psychology teaching for medical students, and in the University's Extension programmes. Active interest and achievement in applied research and writing will be a strong asset.

Salary scales: Senior Lecturer F$12,276-14,450 p.a. Lecturer F$8,490-11,878 p.a. (£1 sterling equals F$1.80). Fall a limited number of posts, the British Government may supplement salaries in range £1,788-5,214 (sterling) (revised annually) and, normally (free of tax) plus associated benefits. Family passages; baggage allowance; gratuity; 3 year contract; accommodation; appointment grant. Detailed applications (2 copies) with Curriculum Vitae and naming 3 referees to be sent direct to Registrar, USP, PO Box 1168, Suva, Fiji by 13 June 1980. Applicants resident in the UK should also send one copy to Inter-University Council, 90/91 Tottenham Court Road, London, W1P 0PT. Further details may be obtained from either address.

THE PAPUA NEW GUINEA UNIVERSITY OF TECHNOLOGY

(MATHSON LIBRARY)

SENIOR ASSISTANT LIBRARIAN (CATALOGUER)

Salary: K12,610 or K14,860 per annum
Plus 24% Gratuity (Kina 1 = approx. Stg. .6531)

Initial contract period, three years. Other benefits include a gratuity equal to 24% appointment, repatriation and leave fares (self, member and family); settling-in and out allowances; six weeks paid leave per year; education fares and assistance towards school fees; free housing. Salary continuation and medical benefit schemes available.

For information and conditions of service write to (quoting post): The Registrar, University of Technology, P.O. Box 793, LAE, Papua New Guinea. Applications close on 15th June, 1980.

UNIVERSITY OF SURREY

TEMPORARY LECTURESHIP IN RUSSIAN

1 September, 1980—31 August, 1981

A temporary lecturer is required for one session to teach undergraduates Russian Language while a full-time member of staff is on leave.

The salary will be paid on one of the first four points of the Lecturer's scale according to age and experience: £5,032-16,062.

Further particulars of the post may be obtained from the Academic Registrar (LPD), University of Surrey, Guildford, Surrey GU2 5XH, or by telephone on Guildford (0483) 571281 (Extension 276). Applications in the form of a curriculum vitae, together with the names and addresses of two referees, should be sent to the above not later than 23 May 1980.

THE QUEEN'S COLLEGE, GLASGOW

(A Scottish Central Institution)

LECTURER 'A' IN DIETETICS

(L.II/S.L. equivalent)

(£4,574-£9,020)

The appointee will join the existing team of Dieticians to teach Normal and Therapeutic Nutrition and Diet Therapy on degree and post-graduate courses in Dietetics. There will also be opportunity to contribute to one of the research programmes of the Department. The College invites applications from individuals with an appropriate degree qualification and relevant professional experience who are seeking a stimulating and challenging environment.

Further details of the post and forms of application, may be obtained from:

Personnel Office,
The Queen's College, Glasgow,
1 Park Drive, Glasgow G3 6LP.
or by telephoning 041 334 5141 Extension 52.

The closing date for application is Friday 6th June, 1980.

University of London
DEPARTMENT OF EXTRA-MURAL STUDIES

The Senate invite applications for a post of

RESIDENT STAFF TUTOR

for the Tutorial Classes section of the above Department. The successful applicant will be required to act as "area officer" responsible for organizing and developing the work of the Department in South Hertfordshire and London Borough of Enfield. High academic qualifications and experience in adult education essential. Applications considered from teachers in any subjects offered by the Committee in its classes but preference given to teachers in the social sciences with special reference to ethnic studies, women's studies or industrial studies.

Salary on the scale £5,052-£10,464, plus London Allowance. Membership of USS/USPS.

Application forms and further particulars of the post and the work of the Committee (both of present under review) obtainable from the Personnel Officer, University of London, Senate House, Malet Street, London, WC1. Tel. 01-636 8000 ext. 15. Closing date for applications is 6 June 1980.

The Queen's University Belfast

THE JOHN HENRY BIGGART LECTURESHIP IN NEUROPATHOLOGY

Department of Pathology

This post is tenable from 1st October, 1980, or such later date as may be arranged. It is open to medical or non-medical graduates.

Applicants must have previous experience in the field of Neuropathology, and a knowledge of specialised techniques which a neurochemistry or electron-microscopy would be an advantage. The successful applicant will be required to conduct research into multiple sclerosis and associated disorders.

Salary scale is £8,052-£10,465 with contributory pension rights under FSSU or USS. Initial placing on the salary scale will depend on age, qualifications and experience.

Further particulars may be obtained from the Personnel Officer, The Queen's University of Belfast, 97 TNR, Northern Ireland. Closing date: 14th June, 1980. Please quote Ref. BOY/HEE.

Southampton UNIVERSITY

CHAIR OF ECONOMICS

Applications are invited for a Chair in the Department of Economics which became vacant on the retirement of Professor D. C. Rowan. Further particulars may be obtained from the Secretary and Registrar, The University, Southampton, SO9 5NH, and applications (10 copies from applicants in the U.K. and one copy from others) must be submitted before 27 June, 1980.

UNIVERSITY OF SALFORD

COMPUTING LABORATORY COMPUTING OFFICER

In the operating systems group to provide systems support and development for the university's computing service on its prime 400/90 and ICL 1904S computers. Applicants should have a good knowledge of Fortran and any assembly language experience would be an advantage.

The laboratory is highly involved with networks, local and national via PSS, and an interest in this area would be an asset. Salary £6,052-£8,789 p.a. USS superannuation.

Further particulars and application forms may be obtained from The Registrar, University of Salford, Salford M5 4WT, to whom completed applications should be returns by 8 June, 1980, quoting reference CL/73/THES.

UNIVERSITY OF QUEENSLAND
Australia

SCHOLARSHIP

DEPARTMENT OF CIVIL ENGINEERING

Applications for graduate study in 1981 in the areas of Structures, Mechanics, Transportation, and Fluid Mechanics, leading to Ph.D. degrees.

Including tuition, annual research stipends are up to $A7,500.

For details and applications please write to Professor C. O'Connor, Department of Civil Engineering, University of Queensland, St. Lucia, 4067, Queensland, Australia.

ASTON IN BIRMINGHAM

THE UNIVERSITY

DEPARTMENT OF PHARMACY

Applications are invited for the following post:

LECTURESHIP IN MICROBIOLOGY

Applicants for this post should be synthetic microbiologists or Biochemists.

The successful candidate will assist in the teaching of Microbiology, Biochemistry and possibly other appropriate aspects of Pharmacy, and pursue active research, preferably on an aspect of Chemotherapy/bacterial resistance.

Enquiries/queries may be made direct to Professor J. H. W. Street (Tel: 236 4291).

Commencing salary will be within the range £3,063 to £4,104 per annum, on a scale rising by annual increments to £10,464 per annum.

Application forms and further particulars may be obtained from the Staff Officer (quoting ref. A/80/101), University of Aston in Birmingham, Gosta Green, Birmingham B4 7ET. Telephone 021-359 3611 extension 4064 to whom applications should be returned within 14 days of there appearance of this advertisement.

BIRMINGHAM

THE UNIVERSITY

DEPARTMENT OF MECHANICAL ENGINEERING

LECTURESHIP IN CONTROL ENGINEERING

Applications invited for the above post from young graduates (including with academic and or industrial) in and D experience and a background or interest in one of the following ancillaries of control theory: robotics, automation, predictical techniques, use of microcomputers, micro-processors, mini-computer systems.

The successful candidate should contribute a high intellectual calibre, strong motivation and ability in innovatic in it and it and is united engineering teaching. He also will be offered excellent research facilities and every encouragement and support to develop a successful teaching or research career.

Salary according to experience and qualifications on the scale £3,063 to £10,464 (under review), plus superannuation.

Further particulars and application forms available from Personnel Officer, The University, Birmingham B15 2TT. Telephone 021-414 3344 quoting reference 80/101. Closing date for applications is 6 June 1980.

CARDIFF

UNIVERSITY COLLEGE

Applications are invited for the post of

TUTORIAL FELLOW

in 19th and 20th century European History, the Department of Medieval, Modern and American History. Special interest in European or American History will be an advantage. Salary range: £3,063-£10,464 per annum. Duties 1980, Commencing 1st October, 1980, for three years only.

Applications (2 copies) to be sent with the names and addresses of two referees to the Staff Officer (Personnel), University College, Cardiff, CF1 1XL, from whom further particulars may be obtained. Closing date for June 15th, reference 2632.

BUCKINGHAM

THE UNIVERSITY COLLEGE

LECTURESHIP IN LAW

Applications are invited for the post of LECTURER in LAW, from 1st July, 1980, or later.

Salary reflecting qualifications and experience.

Further particulars from the Academic Registrar, The University College at Buckingham, MK18 1EG, with whom applications should be lodged by June 30th.

NATIONAL UNIVERSITY OF LESOTHO

Applications are invited for the post of SENIOR LECTURER/LECTURER IN DEPARTMENT OF SOCIAL ANTHROPOLOGY/SOCIOLOGY tenable from mid-September, 1980. Candidates should possess a higher degree in Sociology and/or Social Anthropology and be familiar with both disciplines and contemporary theories in African and Third World. Experience in teaching and research in Africa would be an added advantage. Salary scales (under review): Senior Lecturer R7,473-8,433 p.a. Lecturer R5,493-7,827 p.a. (£1 sterling=R1.77). Non-contributory superannuation or gratuity, 15% inducement allowance for expatriates not qualifying for any supplementation scheme. Accommodation at reasonable quality. Family passages and baggage allowance; Education allowance; Vacation and study leave. Detailed applications (two copies) including a curriculum vitae and naming three referees by 10 June, 1980, to the Assistant Registrar (Appointments), National University of Lesotho, PO Roma, Maseru, Lesotho. Applicants resident in U.K. should also send one copy to Inter-University Council, 90/91 Tottenham Court Road, London, W1P 0PT. Further particulars from either address.

Universities continued

UNIVERSITY OF WESTERN AUSTRALIA PERTH

ENGLISH

Applications are invited for appointment as LECTURER in the Department of English. The Department offers courses in Medieval, Renaissance, Augustan, Romantic, Victorian and Twentieth-Century English Literature, Shakespeare, the Novel, Literary Criticism, American and Australian literature. Applications are invited from candidates with interests in any of these fields of study but, other things being equal, preference will be given to candidates whose interests in American literature. Enquiries of an academic nature should be addressed to the Head of the Department, Dr J. A. Hay.

The current salary range is $A17,024 to $A22,364 per annum. Benefits include superannuation similar to FSSU, fares to Perth for appointee and dependent family, removal allowance, study leave and long service leave and housing loan scheme.

Applications in duplicate stating full personal particulars, qualifications and experience should reach the Acting Staffing Officer, University of Western Australia, Nedlands, 6009, Western Australia, by June 14, 1980. Candidates should request three referees to write immediately to the Acting Staffing Officer.

THE AUSTRALIAN NATIONAL UNIVERSITY

Research School of Physical Sciences

Department of Mathematics

POSTDOCTORAL FELLOW/ RESEARCH FELLOW

Applications are invited from suitably qualified persons for appointment to the above-mentioned positions.

Current departmental research interests include number theory, group theory, computational group theory, Burnside problems, groups of prime-power order, and variational, global analysis and harmonic analysis, ordinary differential equations and control theory, foundations and set theory, linear algebraic groups, and combinatorics, but applications will be considered in any field of modern mathematics.

Closing date: 15th AUGUST, 1980.

Conditions of Appointment:

Salary on appointment will be in accordance with qualifications and experience within the range: Research Fellow, $A17,024-$22,222: Qualified Fellow, a fixed point between $A17,024-$22,222 per annum. Present exchange rate: $A1 = UK£0.60 = US$1.60. Appointment as Research Fellow is for three years with possible extension of two years. Postdoctoral Fellows are appointed for one or two years. Applications from those able to obtain leave of absence without pay from their own institutions will be welcomed.

Reasonable appointment expenses are paid. Superannuation benefits are available for appointees who are eligible to contribute. Assistance with finding accommodation is provided for an appointment from outside Canberra. The University reserves the right not to make an appointment or to make an appointment by invitation at any time.

Prospective applicants should obtain the further particulars from the Association of Commonwealth Universities (Appts.), 36 Gordon Square, London, WC1H 0PF.

UNIVERSITY COLLEGE DUBLIN

Temporary Appointment in the Department of German

Applications are invited for a temporary academic appointment in the Department of German. The appointment will be made at the level of Assistant Lecturer and will be tenable for one initially but may be extended for a second year. Applicants should be able to teach the German language, and to give lectures and classes in both Middle High German Literature and aspects of nineteenth and twentieth century German Literature.

The current salary scale for an Assistant Lecturer is: £5,425-£6,781.

Entry point on this scale will be in accordance with qualifications and experience.

Prior to application, details of application procedure should be obtained from the Secretary and Bursar, University College, Belfield, Dublin 4. Please quote Ref. No. GN72. Telephone enquiries: 693244, ext. 431.

The latest date for receipt of completed applications is Thursday, 12th June, 1980.

UNIVERSITY OF ESSEX

Research Officer in the Department of Electrical Engineering Science

A Research Officer is required as soon as possible to work on low-capacity, n.c.m. transmission and switching systems for rural distribution systems in developing countries. Applicants should be graduates in electrical engineering with some experience in digital transmission systems and a knowledge of the telecommunications needs of developing countries. The appointment will be initially for one year with the possibility of extension to two years. Salary according to age and experience on the Range 1B scale: £4,405-£6,505.

Applications (two copies) including a curriculum vitae and the names and addresses of two referees, should reach Mr. J. P. Sumner, Department of Electrical Engineering Science, University of Essex, Wivenhoe Park, Colchester CO4 3SQ (telephone: 0206 862286, Extension 2871), from whom further particulars may be obtained, within two weeks of the appearance of this advertisement.

University of The South Pacific

Applications are invited for the following posts:—

(1) REGISTRAR (Post 80/32) tenable from January, 1981. Candidates should hold graduate qualifications and have wide administrative experience, preferably in a University or similar tertiary-level institution. Experience in developing countries would be an advantage. The Registrar serves as Secretary to Council and Senate and is directly responsible to the Vice-Chancellor for the organisation and control of the administration of the University.

(2) UNIVERSITY LIBRARIAN (Post 80/33), to be responsible for the administration and development of its Library and Library Services. Applicants must have a good degree, full professional qualifications, and wide experience in librarianship, including librarian in tertiary education institutions. Experience in developing countries would be an advantage. In particular a high level of organizational ability is required for the task of providing for the Library needs, including staff training, of the eleven campuses of the University's region, both from the central Library and its satellites, in encouraging the development of national and regional bibliographies, providing information services and so on for the South Pacific. The University Librarian will be expected to maintain international standards and to introduce or adapt new technologies as circumstances justify.

Salary scale (for both posts): F$19,323 to F$29,735 per annum (F1 sterling equals F$1.60). For a limited number of posts the British Government may supplement salaries to either F$9,964 or F$5,192 per annum (sterling) (reviewed annually and normally free of tax) plus passages, benefits, family passages, baggage allowance (probably a three-year contract), accommodation or appointment grant. Detailed applications (two copies) with curriculum vitae and naming three referees to be sent direct to Registrar, USP, P.O. Box 1168, Suva, Fiji, by June 30 1980. Applicants resident in the UK should also send one copy to Inter-University Council, 29/31 Tottenham Court Road, London W1P 0DT. Further details may be obtained from either address.

CAMBRIDGE

THE INSTITUTE OF CANCERRESEARCH

wishes to appoint a:

RESEARCH ASSISTANT/ RESEARCH OFFICER

for two years from 1 September 1980 (or later) and initial salary in the range £4,025 - £6,505 according to age and qualifications (a supplement of £400 per annum is payable to those in London weighting area).

Applications, giving full curriculum vitae and the names of three referees, should reach the Secretary, Institute of Cancer Research, Sutton, Surrey, SM2 5PX, from whom further particulars may be obtained.

DURHAM

THE UNIVERSITY

DEPARTMENT OF GEOLOGICAL STUDIES

Applications are invited for the post of Temporary ASSISTANT OFFICER for two years from as soon as possible (or later) in the Geophysics Section of the Department of Geological Sciences.

The successful candidate will assist with geophysical laboratory and field projects which will include responsibility for the seismic processing laboratory and for maintenance of computers and ancillary equipment. Previous knowledge of geophysics is an advantage but is not essential. Applicants should possess a degree in a science or engineering subject. A qualification in computing sciences would be an advantage.

Initial salary in the range £4,405 to £6,505 per annum on National Scale Range 1D plus superannuation.

Application (three copies) naming three referees, should be sent by May 31, 1980 to the Personnel Officer, Secretary's Office, Durham University, Old Shire Hall, Durham DH1 3HP, from whom further particulars may be obtained.

GLASGOW

THE UNIVERSITY

LECTURESHIP IN ECONOMICS

Applications are invited for a LECTURESHIP in the department of POLITICAL ECONOMY. Preference will be given to candidates whose special interest is in public sector economics (taxation, public expenditure, fiscal federalism, cost-benefit analysis, etc). Candidates in the field of industrial economics may also be considered.

Salary will be within the range £5,083 to £7,410 on the lecturers' scale or £8,000 to £10,484 according to qualifications and experience.

Further particulars may be obtained from the Secretary of the University Court, Room 191, University of Glasgow, Glasgow G12 8QQ, with whom applications (one copy) giving the names and addresses of three referees, should be lodged on or before 13th June, 1980.

Ref. A/497. Please quote Ref.

GLASGOW

THE UNIVERSITY

KELVIN LABORATORY

ROBERTSON ASSISTANT IN NUCLEAR SPECTRA (PHYSICS)

Applications are invited for a postdoctoral research assistantship at the Kelvin Laboratory in the Department of Natural Philosophy. The person appointed will participate in the nuclear physics research programme of the laboratory, which centres on the spectroscopy of light nuclei using a 30 MeV cyclotron.

The post is tenable for two years and the salary (on the scale £4,405 to £6,505 per annum) will be determined by the Secretary, University of Glasgow, Glasgow G12 8QQ, from whom further details of the post may be obtained.

Applications, stating name, academic qualifications, research experience and the names of three referees, should be submitted not later than 30 May, 1980.

ASTON IN BIRMINGHAM

THE UNIVERSITY

MANAGEMENT CENTRE

Applications are invited for the following appointment in the Economics, Econometrics, Statistics and Marketing Subject Group.

SENIOR LECTURESHIP IN MARKETING

The successful applicant will be expected to contribute to the Undergraduate and Postgraduate teaching programmes in Marketing and to undertake cost Accountancy teaching in his or her speciality, as well as participating in the administrative activities of the Centre.

Candidates are invited to contact Professor D. A. S. Jackson at the Management Centre (Tel. Lat. 0564) on an informal basis.

Commencing salary will be within the range £10,142 to £13,654 per annum. Appointments are normally made to the first point of the scale.

Application forms and further particulars may be obtained from the Staff Officer (quoting Ref. No. 115 1561), University of Aston in Birmingham, Gosta Green, Birmingham B4 7ET (Tel 021 359 3611, Ext. 4011), to whom applications should be returned not later than two weeks after the appearance of this advertisement.

DUNOORE

THE UNIVERSITY

DEPARTMENT OF PHARMACOLOGY AND THERAPEUTICS

LECTURESHIP IN PHARMACOLOGY

Applications are invited for a LECTURESHIP in PHARMACOLOGY (effective from 1 October, 1980) in the Department of Pharmacology and Therapeutics, Ninewells Hospital and Medical School, University of Dundee. Candidates should identify have experience in Cardiovascular Pharmacology or some other aspect of extensive pharmacology. The successful candidate will be expected to contribute to the teaching of pharmacology to science and medical students and to develop research interests in this area described. Salary scale £9,004 to £10,484 (under review). Superannuation under USS. Grant towards removal expenses to Dundee.

Further particulars may be obtained from the Secretary, The University, Dundee DD1 4HN, with whom applications (one copy) naming three referees and stating full details of career to date should be lodged by 6th June, 1980. Please quote reference 1551.

University of Oxford

HEALTH SERVICE COMMISSIONER

Applications are invited for the post of Assistant Health Service Commissioner. The Commissioner is responsible for investigating complaints of maladministration against the National Health Service in England and Wales. The post is part-time (2 days a week) and is for a fixed period of three years. The salary is £7,000 per annum.

Applications, which should be made by 30 June, 1980, to the Secretary, Oxford Regional Hospital Board, Cherwell House, 2 Wellington Square, Oxford OX1 2JG, from whom further details may be obtained.

ESSEX

THE UNIVERSITY

DOCTORAL RESEARCH IN POLITICS

DEPARTMENT OF GOVERNMENT

The Department invites applications for admission to the Research Programme leading to the award of Doctor of Philosophy.

S.S.R.C. quota awards are available for suitably qualified candidates for October 1980. Normally, successful candidates will have completed a Master's degree or equivalent.

The Department specialises in:

Political Theory
Political Behaviour (which includes Elections, Comparative Politics, Electoral Sociology, Policy Analysis)
Formal Political Analysis
And in these areas:
Soviet Union
Western Europe
United States of America
Latin America.

The Department has a large staff teaching a wide variety of specialisms, access to excellent computing facilities and is a well-staffed library, which contributes to a lively and creative environment.

The Department offers one Master's programme in Political Research, Political Theory, Western European Politics and the Politics of the Soviet Union, United States of America and Latin America.

Further details and application forms from: Graduate Secretary, Department of Government, University of Essex, Colchester CO4 3SQ.

HONG KONG

THE UNIVERSITY

POSTS IN URBAN STUDIES/ URBAN PLANNING

Applications are invited for the posts in Urban Studies/Urban Planning, one to be held in the Department of Geography, one in Law and the Department of Economics, Sociology and Anthropology, Political Science and Sociology, but the appointees will be expected to contribute to the urban studies programme in Urban Studies and Urban Planning organized by the Centre of Urban Studies, in addition to teaching other courses within their respective School and Departments. The appointees will also become Fellows of the Centre for Urban Studies and will be expected to participate in research in Urban Studies/Urban Planning. Applicants for the Urban Studies post should possess appropriate qualifications in Geography or Law or equivalent.

Annual salaries (superannuation) are:

Lecturer HK$114,180 to HK$173,520 (or HK$103,200 to HK$157,020 if not in receipt of Senior Lecturer HK$125,640 to HK$184,980 or Reader HK$134,400 to HK$197,280).

Lecturer HK$114,180 to HK$173,520 (or HK$103,200 to HK$157,020 if not in receipt of Senior Lecturer HK$125,640 to HK$184,980 or Reader HK$134,400 to HK$197,280).

Assistant Lecturer HK$84,300 to HK$126,900.

(£1 = HK$11.00 approx.)

Starting salary will depend on qualifications and experience.

At current rates, salaries incl will not exceed 16% of gross income. Housing at a rental of 3% of salary subject to allowance, some leave and medical benefits are provided.

Further particulars and application forms may be obtained from the Association of Commonwealth Universities (Appts.), 36 Gordon Square, London, WC1H 0PF, or from the Recruitment Section, Secretary's Office, University of Hong Kong, Hong Kong.

The closing date for applications is 30th June, 1980.

LONDON

UNIVERSITY OF LONDON GOLDSMITHS' COLLEGE

SCHOOL OF ADULT AND SOCIAL STUDIES

DEAN DO ADULT AND COMMUNITY STUDIES

Applications are invited for the post of DEAN DO ADULT AND COMMUNITY STUDIES in the School of Adult and Social Studies.

The successful applicant should have high academic qualifications substantial Adult and/or Community Education experience, administrative ability, relationships to programme planning and the ability to lead a large team of full and part-time staff.

The Dean will be expected to contribute to the development of research, study and teaching in Adult and Community Education in a University Department. The Dean will also be expected to play a full part in the life of the College and of central academic. He/she will be responsible, to the Warden, for Richard Hoggart.

The recently arisen decision of the impending retirement of the present Dean of the School, Mr. K. A. Bertram. The successful applicant will be expected to take up duties on 1st January 1981 or as soon as possible thereafter.

Salary scale: £9,004 plus London Weighting £200 (this latter will further increase as a result of the Review Teachers' Salaries in Inner London Boroughs).

Write for further details to the Registrar, Goldsmiths' College (Deptford), University of London, New Cross, London SE14 6NW, quoting reference. Applications 30 June, 1980.

HULL

THE UNIVERSITY

ACCOMMODATION OFFICER

Applications are invited for the post of Accommodation Officer in the Housing Department. The main duties of the post are concerned with the co-ordination and publicity of the allocation of student accommodation and the management of Student Houses. It is expected that the post will be filled by a graduate or a holder of equivalent professional qualifications with substantial relevant experience.

Salary: at appropriate point on the scale £4,405 to £6,505 per annum.

Applications (one copy) giving details of name, qualifications and experience, together with the names of two referees should be sent by 6th June, 1980, to the Registrar, The University of Hull, Hull HU6 7RX, from whom further particulars may be obtained.

HULL

THE UNIVERSITY

TEMPORARY LECTURER IN GERMAN

Applications are invited for the post of TEMPORARY LECTURER IN GERMAN, tenable for one year from 1st October, 1980. Preference may be given to candidates with an interest in literature and society from 1933 to the present day.

Salary scale: £5,083 to £10,484 per annum.

Applications (six copies) giving details of age, qualifications and experience, together with the names of two referees should be sent by 6th June, 1980, to the Registrar, The University of Hull, Hull HU6 7RX, from whom further particulars may be obtained.

HULL

THE UNIVERSITY

LECTURESHIP IN LINGUISTICS

The DEPARTMENT OF LINGUISTICS requires a permanent lecturer in phonetics and phonology (the general linguistic aspects of the subject) to teach courses in phonetics and phonology at all levels, in addition to teaching other courses within their respective fields of interest. Experience in teaching English as a foreign language is desirable.

Salary scale: £5,083-£7,410 (Lecturer) £8,000-£10,484 (Senior Lecturer).

Applications (six copies) giving details of age, qualifications and experience, together with the names of two referees should be sent by 6th June, 1980, to the Registrar, The University of Hull, Hull HU6 7RX, from whom further particulars may be obtained.

MANCHESTER

THE UNIVERSITY

LECTURER IN GENERAL LINGUISTICS

Applications are invited for this post. Candidates should possess a thorough knowledge of both grammatical theory and one of contemporary English or another language.

Salary scale: £5,083-£7,410 (Lecturer) £8,000-£10,484 (Senior Lecturer).

Applications (six copies) giving details of age, qualifications and experience, together with the names of three referees, should be sent by 6th June, 1980, to the Registrar, The University of Hull, Hull HU6 7RX, from whom further particulars may be obtained.

LONDON

LONDON SCHOOL OF ECONOMICS

RESEARCH ASSISTANT AFRO-CARIBBEAN ARTS ORGANIZATIONS AND FUNDING

Applications are invited for the post of RESEARCH ASSISTANT (full time) to work for 10 months in one year on a project evaluating the constraints of public funding policies on the activities of Afro-Caribbean Arts and Cultural organizations. Experience as part of a broad comparative study on minority cultural activities. Candidate should have a sound research background or good honours degree in one of the Social Sciences, one an interest in Statistical methods. Salary will be in the region of £4,500 including London Weighting.

Application forms and further particulars from the Personnel Department, LSE, Houghton Street, London WC2A 2AE. Tel: 01-405 7686. Closing date 6 June.

HULL

THE UNIVERSITY

DEPARTMENT OF SCANDINAVIAN STUDIES

Applications are invited for appointment to a Temporary LECTURESHIP in SCANDINAVIAN STUDIES tenable for one year from October 1, 1980.

Salary scale £6,063 to £10,484 per annum.

Applicants (six copies) giving details of age, qualifications and experience together with the names of two referees should be sent by June 7 1980 to the Registrar, The University of Hull, Hull HU6 7RX, from whom further particulars may be obtained.

HONG KONG

THE UNIVERSITY

SENIOR WORKSHOP ENGINEER NO TUNG WORKSHOPS

Applications are invited for this new post which will be available from July 1, 1980.

The Senior Workshop Engineer will be responsible for the control, maintenance and repair facilities for design, construction and repair of equipment and also for the workshop and industrial training of engineering undergraduates.

Applicants should be Chartered Engineers (U.K.) or Corporate members of the Hong Kong Institution of Engineers, with at least a first degree in engineering plus a minimum of seven years' post-qualification experience. Experience in workshop training would be an advantage.

Annual salary (superannuable): Lecturer: HK$103,200 to HK$157,020 (or HK$114,180 to HK$173,520 if not in receipt of a rental of 7½ per cent of salary). Assistant Lecturer: HK$84,300 to HK$126,900.

Further particulars and application forms may be obtained from the Association of Commonwealth Universities (Appts.), 36 Gordon Square, London, WC1H 0PF, or from the Recruitment Section, Secretary's Office, University of Hong Kong, Hong Kong.

The closing date for applications is 30 June, 1980.

Polytechnics

NORTH LONDON POLYTECHNIC

DEPARTMENT OF ENVIRONMENTAL DESIGN

SCHOOLS OF ARCHITECTURE AND TOWN PLANNING

Temporary SENIOR LECTURER

Applications are invited for a temporary post, available for one year, starting on 1st July 1980.

The primary aim of the appointment is to develop and supervise project work, particularly in the Architectural Research Unit, in co-operation with the Unit's staff. The activities in which the Unit's staff are concerned have the study of physical responsibility modelling techniques.

Salary Scale: £7,092-£8,607 (BARA) or £6,066-£7,591 (London Allowance with the Greater London Weighting). Interim award and subject to formal approval.

Application form and further details obtainable from the Establishment Officer, 166-220 Holloway Road, N7 8DB.

Closing date: 11th June, 1980, quoting reference 1/P/424 (Post A or B) and stating whether further particulars are required.

HULL

THE UNIVERSITY

ACCOMMODATION OFFICER

Applications are invited for the post of Accommodation Officer in the Housing Department. The main duties of the post are concerned with the co-ordination and publicity of the allocation of student accommodation and the management of Student Houses. It is expected that the post will be filled by a graduate or a holder of equivalent professional qualifications with substantial relevant experience.

Salary: at appropriate point on the scale £4,405 to £6,505 per annum.

Applications (one copy) giving details of name, qualifications and experience, together with the names of two referees should be sent by 6th June 1980 to the Registrar, The University of Hull, Hull HU6 7RX, from whom further particulars may be obtained.

COVENTRY

COVENTRY (LANCHESTER) POLYTECHNIC

DEPARTMENT OF POLITICS AND HISTORY

LECTURER II IN INTERNATIONAL RELATIONS/ HISTORY

£3806 to £7586 (Contemporary Scale)
(Under Review)

With a special interest in contemporary security and strategy and modern European political history.

For application form and job specification (one copy) enclosing a large stamped addressed envelope: Assistant Personnel Officer, Coventry (Lanchester) Polytechnic, Priory Street, Coventry CV1 5FB, returnable as soon as possible.

NEW ZEALAND

UNIVERSITY OF CANTERBURY

CHRISTCHURCH

The Council of the University invites applications for the following positions:—

CHAIR OF EDUCATION

This is one of two Chairs established in the Department of Education. Applicants should have a good record of scholarship and qualifications in any of the major fields of educational study will be considered.

CHAIR OF LAW

This is one of three Chairs established in the department. Applicants should have graduated in law from a University in New Zealand, Australia, England, and other Common Law country. Preference will be given to applicants with previous research and teaching experience in Commercial Law, Company Law, the Law of Taxation or Labour Law and the Law of Organisations. Applications from persons qualified in other fields will be considered.

In each case the appointee will take up the position on 1st February, 1981, or at some later date by arrangement.

At present the salary range is of NZ$27,533 to NZ$34,255 per annum. The commencing or subsequent salary of the appointee may be increased as a result of the review of individual salaries which the University makes the beginning of each year.

Applications close on 30th June, 1980.

Further particulars and Conditions of Appointment may be obtained from the Association of Commonwealth Universities (Appts.), 36 Gordon Square, London WC1H 0PF.

NEW ZEALAND

UNIVERSITY OF CANTERBURY

Christchurch

LECTURER IN ZOOLOGY (VERTEBRATE ZOOLOGY)

Applications are invited for the above-mentioned position.

Applicants should be qualified to teach and carry out research in vertebrate zoology. Special consideration may be given to applicants with a research interest in fish biology.

The salary for Lecturer is on a scale from NZ$13,592 to $10,801 and according to qualifications and experience.

Applications close on 16 June 1980.

Particulars, including information on travel and removal allowances, study leave, housing and superannuation, may be obtained from the Association of Commonwealth Universities (Appts.), 36 Gordon Square, London WC1H 0PF.

WARWICK

THE UNIVERSITY

ASSISTANT REGISTRAR

Applications are invited for a post of ASSISTANT REGISTRAR in the University Registry. Candidates should have a good honours degree and previous administrative experience. Salary on scale £6,127 to £10,484 per annum.

Further particulars from the Secretary and Registrar, University of Warwick, Coventry CV4 7AL (quoting Ref. No. 32/B/80/A). Closing date for receipt of applications 30th May, 1980. Tel. 0203 24011 (ext. 2637).

Polytechnics continued

LIVERPOOL POLYTECHNIC

LIBRARY SERVICE

SENIOR ASSISTANT LIBRARIAN –(SYSTEMS LIBRARIAN)

£6,836-£7,077 p.a.

The Systems Librarian is directly responsible to the Polytechnic Librarian for the management of the Central Services Unit computer-aided systems and other mechanised and automated services. The successful applicant will be required to have experience of technical services and computing operations.

Please quote reference LP/407

DEPARTMENT OF LAW

PRINCIPAL LECTURER

£8,256-£10,362 p.a. (Post A)

LECTURER II/SENIOR LECTURER (2 POSTS)

£4,806-£8,871 p.a. (Posts B)

The applicants will be expected to participate in the whole range of the Department's teaching, and to undertake research. For the Principal Lectureship, preference may be given to candidates specialising in either Education Law or Welfare Law, and for the Lectureship/Senior Lectureship to candidates willing to teach the above subjects and/or Constitutional Law, English Legal System, and Business Law, but in both cases candidates with other areas of interest are encouraged to apply.

Applicants should hold good honours degrees in law, and preferably a higher degree, or qualifications and experience. It is expected that the successful candidates will be able to assume the positions by September 1st, 1980.

Please quote reference LP/424 (Post A or B)

FASHION AND TEXTILES

LECTURER II/SENIOR LECTURER

(Knitted Textiles and Knitwear Design)

£4,806-£8,871 p.a.

Applications are invited from well qualified designers with relevant professional experience for the post of Lecturer II/Senior Lecturer in Knitted Textile and Knitwear Design.

This is a unique opportunity to join an enthusiastic team in a new department.

The successful applicant would teach students on the B.A. (Hons) Course in Fashion and Textiles.

Please quote reference LP/426

DEPARTMENT OF GRAPHIC DESIGN

LECTURER II/SENIOR LECTURER

(Graphic Design/Pictorial Studies)

£4,806-£8,871 p.a.

It is anticipated that the person appointed will be well qualified in academic and/or professional terms, a fluent draughtsman/woman, versatile graphic artist and designer, an enthusiastic educationalist with an ongoing record of research or professional practice and achievement.

The successful applicant will be expected to teach students in all aspects of the course, and become a course tutor to a number of students within a specific year and sector.

Please quote reference LP/417

Closing date is 14 days from the appearance of this advertisement. Informal enquiries, further details and application forms and further particulars from the Personnel Office, Liverpool Polytechnic, 2 Rodney Street, Liverpool, L1 2UA. Tel.: 051-708 0630. Ext. 48.

THE POLYTECHNIC, HUDDERSFIELD

Further expansion and development has allowed us to extend our degree programmes to include:

BA (HONS) IN BUSINESS LAW

This three year course is designed for those who wish to pursue a career in business and commerce where a legal background is relevant, or alternatively for those who seek qualification as solicitor or barrister, to which course exemption from the Common Professional Examination is granted to successful graduates.

For further details contact: The Registrar, The Polytechnic, Queensgate, Huddersfield HD1 3DH. Tel.: Huddersfield (0484) 22288.

NEWCASTLE UPON TYNE POLYTECHNIC

School of Accountancy

PRINCIPAL LECTURER—COURSE LEADER
SENIOR LECTURER—AUDITING
LECTURER II—MANAGEMENT ACCOUNTANCY

School of Law

LECTURER II

Applicants should possess a good honours degree in law and either a further degree or a professional qualification. Enthusiastic commitment to legal education and research is more important than interest in any particular area of law.

School of Mathematics, Statistics and Computing

SENIOR LECTURER OR LECTURER II IN COMPUTING

To join a group of staff concerned with the teaching of computing throughout the polytechnic. Applicants should be well qualified in computing and have teaching, research and/or business experience. Candidates will be expected to have a special interest in the applications of computing and be prepared to undertake research.

Schools of Construction and Building Services and Surveying

SENIOR LECTURER OR LECTURER II—BUILDING SERVICES ENGINEERING (LIGHTING)

Applications are invited from graduates/professionally qualified engineers to join an expanding team of specialist staff responsible for development of Degree/Diploma courses in Building Services Engineering. Applicants should have recent experience in the design of Lighting/Electrical Services with an ability to support teaching in Building Services topics throughout both courses. Relevant industrial experience essential. Successful applicants will be encouraged in underline research/consultancy activities and provide contacts with industry.

LECTURER II

A Graduate/Professionally qualified Builder/Surveyor is required to join staff responsible for undergraduate and higher technician courses in Building, General Practice Surveying and Quantity Surveying. Applicants should have expected to contribute to the teaching/development of the subject of Building Surveying or Building Technology. Relevant industrial/professional experience an advantage. Opportunities are available for research/consultancy activities.

School of English and History

LECTURER II IN ENGLISH

To be mainly concerned with the B.A. English and History course.

School of Applied Social Science

TEMPORARY LECTURER II IN SOCIOLOGY

Applicants for this temporary post tenable from 1st September 1980 to 31st July 1981 must be qualified to teach the sociology of deviance and other aspects of theory and institutions on the Sociology degree and other courses.

Burnham P.E.

Principal Lecturer: £8,256-£9,162 (bar)-£10,362 p.a.
Senior Lecturer: £7,092-£8,280 (bar)-£8,871 p.a.
Lecturer II: £4,806-£7,586 p.a.

For further details and application form, returnable by 6th June 1980 please call our 24-hour telephone answering service (0632 23126) or send a stamped addressed envelope to-Staff Officer, Newcastle upon Tyne Polytechnic, Ellison Building, Ellison Place, Newcastle upon Tyne NE1 8ST.

• Under review from 1st January 1980.

Polytechnic Cymru

Department of Science

Lecturer Grade II/ Senior Lecturer

A Microbiologist is required to teach to B.Sc. (Honours) level. A higher degree and teaching experience are essential, as is a commitment to research. Degree teaching areas include Microbial Physiology, Microbial Genetics and Industrial Microbiology.

Salary: £4,806-£8,871 p.a. inclusive.

Application forms are available from:—
The Assistant Director (Staffing)
The Polytechnic of Wales
Pontypridd
Mid Glamorgan CF37 1DL
Tel: 0443 405153, ext. 2021

Closing date: 11th June, 1980.

The Polytechnic of Wales

Readvertisement

SUNDERLAND

THE POLYTECHNIC

FACULTY OF HUMANITIES

DEPARTMENT OF BUSINESS MANAGEMENT

PRINCIPAL LECTURER IN ACCOUNTING

Salary Scale: £9,138 to £10,149 (bar £1,584 London revised).

A vacancy exists for a well qualified person to join a team of accountants in the Department of Business Management. Teaching is in undergraduate, post-graduate and post-qualifying areas in Accounting, Management and Business Studies and includes a strong professional and managerial aspects of finance.

The successful applicant will be expected to make significant contribution to the development of course development in the department and will be given opportunities to take part in new developments in the polytechnic generally, including consultancy and other research activities.

This post is a challenging and rewarding opportunity for an academic with an interest in the domestic division of labour, a concern for equality in the workplace and the local community.

For further details and application forms write to: The Senior Assistant Registrar, Faculty of Social Sciences, Polytechnic, Langham Place, Chesterfield Road, Sunderland SR1 3PZ (quoting F.S.S./7/80).

LONDON

THE POLYTECHNIC OF CENTRAL LONDON

PRINCIPAL LECTURER IN COMPUTING (MINERALS)

SENIOR LECTURER/LECTURER II IN MATHEMATICS

For the Principal Lectureship it is expected that the candidate will provide leadership in the consultancy activity undertaken in the Minerals Group. In the subject area of information processing in the commercial environment, he/she will be expected to have good relevant industrial experience allied with an established teaching record.

For the Senior Lectureship/Lecturer II in Mathematics it is expected that the candidate will contribute to the overall mathematics commitment of the Group and at the same time pursue a chosen specialism in a relevant area in this respect, candidates with interests in Analysis and in areas of the applications of Mathematics, Computational Mathematics and Numerical Analysis are particularly welcome.

For both posts an ability to contribute to research, research supervision and postgraduate teaching is essential.

Salary scales: Principal Lecturer: £9,138-£10,149 (bar £1,584 London revised).

Senior Lecturer: £7,092-£8,280 (bar £1,584 London revised).

Lecturer II: £4,806-£7,586 p.a.

Applications should be made on the appropriate form to the Staff Officer, Polytechnic of Central London, 309 Regent Street, London W1R 8AL. Tel.: 01-580 2060, Ext. 48.

Research Posts

BATH

THE UNIVERSITY

SCHOOL OF ENGINEERING RESEARCH OFFICER ENGINEERING INDUSTRIES

A RESEARCH OFFICER is required for a SERC sponsored research project, under the direction of Professor T. J. Wallace, concerned with the development of a novel diesel engine, involving the use of selected ceramic components. The engine will be comprehensively instrumented for pressure, temperature, fuel injection rate, etc. Knowledge of and computing back up facilities already in place.

Candidates should preferably have a higher degree in the field of engine instrumentation and combustion but a PhD is highly desirable.

The appointment will be for an initial period of 2 years, starting on 1st July 1980 or thereafter, according to qualifications and experience.

Application forms and further particulars may be obtained from the Registrar, University of Bath, Bath BA2 7AY, quoting reference number 80/13. Closing date: 31.5.80.

BUCKINGHAM

THE UNIVERSITY COLLEGE

RESEARCH OFFICER MEASUREMENT EVALUATION IN THE ARTS

Applications are invited for the post of RESEARCH OFFICER on a two-year (full-time) contract to work on a research project concerned with problems in the evaluation of the performed arts. The project is being jointly opened as soon as possible by Professor S. Foucault, Professor R. Boucher, Mr R. Boucher, Mr Ian Quale (0280 33122 ext. 2 for further details), and will reflect their interests.

The successful applicant will have a Ph.D. in Economics or Statistics or equivalent experience, and preferably some research experience in the arts, and specialist knowledge of the application of statistics to the performing arts.

Salary: £4,405 per annum, plus superannuation.

Applications (six copies) with full curriculum vitae and the names and addresses of two referees, should be sent to Mrs. A. Thomson, Department of Plant Biology, University of Hull, HU6 7RX, by June 10, 1980.

LONDON

THE UNIVERSITY

THE LONDON SCHOOL OF ECONOMICS

S.S.R.C. RESEARCH-LINKED STUDENTSHIP

BUSINESS HISTORY UNIT

Applications are invited for a two year studentship, linked to the business history unit's research programme on post-1870 business history. Candidates should propose a topic of research within the broad theme of modern business, including technological change, the development of multinationals, oil economics, nationalisation, government and industry, social and cultural background of entrepreneurs, business management and strategy, and other related studies of enterprise.

Candidates should have or expect to have a good honours degree in history, or related subject, and if successful will be registered for a research degree of the University of London. Application forms and further details from Organisation Secretary, The London School of Economics, Houghton Street, London WC2A 2AE. Closing date for applications: June 9, 1980.

LONDON

THAMES POLYTECHNIC

SCHOOL OF BUSINESS ADMINISTRATION

SENIOR LECTURER/ LECTURER II

A SENIOR LECTURESHIP in ACCOUNTING and FINANCE is available from 1 September 1980. Candidates should have either a first law or higher degree in Accounting and an interest in teaching and professional qualification and research in corporate planning and capital budgeting.

Salary scale: Lecturer Grade II £4,806 to £7,586 (inclusive) Senior Lecturer £7,092 to £8,280 (bar)—£7,880 (inclusive).

Further particulars and application form from the Staff Officer, Thames Polytechnic, Wellington Street, Woolwich, SE18 6PF. Closing date for applications: June 9, 1980.

PRESTON

THE POLYTECHNIC

Applications are invited for the following appointments:

SENIOR LECTURER and SENIOR LECTURER IN ACCOUNTING AND FINANCE.

For one of these posts, preference will be given to applicants offering electronics and/or Auditing.

AA/2/80

SENIOR LECTURER or LECTURER II in LAW, reference AA/33/1

Salary scales (under review): Senior Lecturer £7,092 to £8,280 (bar) £8,880 (inclusive). Lecturer II £4,806 to £6,669 (bar) £7,586.

Details quoting reference numbers from the Personnel Officer, Preston Polytechnic, Corporation Street, Preston PR1 2TQ. Closing date: May 23, 1980.

KENT

UNIVERSITY OF KENT AT CANTERBURY

FACULTY OF SOCIAL SCIENCES

RESEARCH OPPORTUNITIES IN SOCIOLOGY AND SOCIAL ANTHROPOLOGY AND S.S.R.C. LINK STUDENTSHIP

Applications are invited from candidates who have, or expect to obtain, a good honours degree in Sociology or Social Anthropology. Three research awards are available for a higher degree by research in Sociology or Social Anthropology. In addition, there is an S.S.R.C. "Link" Studentship linked to a research project entitled "Marriage and Kinship in Mediterranean Europe" directed by Professor R. T. Fallers. In addition to the studentship, there is also a Link Studentship linked to the Kent Sociology Unit's work in an isolated working class community with a high rate of unemployment on one of the Isle of Sheppey (Kent) (2) the informal economy. (2) women's employment and the domestic division of labour. (3) Ethnicity and the local authority and the local community.

Candidates should preferably have a higher degree in the field of engine instrumentation and combustion but a PhD is highly desirable.

The appointment will be for an initial period of 2 years, starting on 1st July 1980 or thereafter, according to qualifications and experience.

Application forms and further particulars may be obtained from the Registrar, University of Bath, Bath BA2 7AY, quoting reference number 80/13. Closing date: 31.5.80.

HULL

THE UNIVERSITY

DEPARTMENT OF PLANT BIOLOGY

POST-GRADUATE RESEARCH ASSISTANTSHIP

A post-graduate RESEARCH ASSISTANTSHIP is required from 1 October 1980 for an investigation of the pollination biology of the Australian transplant Hebe anomala (Scrophulariaceae) by pollinating phalaenomyiines, Lepidoptera and other insects, and the ecophysiology of the pollinators. Lepidoptera which can hover are of interest.

Applicants are invited from persons who have had experience of research within Zoology or Botany and who have a good knowledge of the Lepidoptera. Ability to undertake field work in remote areas is essential.

The position, which will be supported by the SRC, is for an initial period of one year, extendable to three, and the successful applicant may be eligible to register for a higher degree. The starting salary will be £4,405 per annum plus USS.

Enquiries for further details, and applications with full curriculum vitae and the names and addresses of two referees, should be sent to Dr. W. Arber, Department of Plant Biology, University of Hull, HU6 7RX, by June 10, 1980.

HULL

THE UNIVERSITY

DEPARTMENT OF PLANT BIOLOGY

POST-GRADUATE RESEARCH ASSISTANTSHIP

A post-graduate RESEARCH ASSISTANTSHIP is required from 1 October 1980 for an investigation of the pollination biology of the Australian transplant Hebe anomala (Scrophulariaceae) by pollinating phalaenomyiines,

Research Posts continued

INDUSTRIAL RELATIONS RESEARCH

Applications are invited for a post as Research Fellow in industrial relations at the Policy Studies Institute. Initially, for one year, the successful applicant will be expected to work on a large scale survey of workplace industrial relations. Subsequently, there should be scope to carry out other PSI projects in industrial relations. Applicants should have a good honours degree, research experience in industrial relations and familiarity with social survey methods. The salary will be up to £6,000 (University scales) USS. pension.

Applications with curriculum vitae to: W. W. Daniel, Policy Studies Institute, 1/2 Castle Lane, London SW1E 6DR.

PLYMOUTH POLYTECHNIC

NERC RESEARCH STUDENTSHIP

1980—HEAVY METAL INTERACTIONS DURING ESTUARINE MIXING

A research student is required to join a multi-disciplinary research team investigating chemical processes in estuaries. The work involves a study of the Physicochemical Processes controlling the cycling of AS, SE, Sb and SN in complex solutions of the estuarine type. Laboratory studies will be complemented by extensive fieldwork in local estuaries using a fully equipped survey craft. Applicants should hold or expect to obtain a good honours degree or equivalent in a relevant subject. The project is for 3 years and the person will be expected to register for a higher degree.

Application form to be returned by Friday 30th May, 1980 can be obtained with further particulars from the Personnel Officer, Plymouth Polytechnic, Drake Circus, Plymouth PL4 8AA.

LONDON

THE POLYTECHNIC OF NORTH LONDON

DEPARTMENT OF HISTORY, PHILOSOPHY AND EUROPEAN STUDIES

RESEARCH ASSISTANT

Applications are invited for the post of RESEARCH ASSISTANT on a project on British Trade Unionism and West European Integration.

Applicants should have a good Honours Degree in a relevant subject, preferably including British and European History with Politics or Labour Studies.

The successful candidate will be expected to register for a PhD in this subject.

Salary: scale £3,078 to £5,268 plus £550 London Allowance.

Application form and further details from the Departmental Secretary, Department of History, Philosophy and European Studies, Polytechnic of North London, Prince of Wales Road, N.W. 5.

LONDON

EALING COLLEGE OF HIGHER EDUCATION

RESEARCH ASSISTANT in MARITIME ECONOMICS (One Year)

GRADUATE required to assist with research project on comparative costs in the maritime sector. Good knowledge of economic analysis, preferably with quantitative material. Interest in history of transport economics an advantage, but not essential. Salary: Top of Inspiral Grade Junior Lecturer, £3,078 on the scale as provisle Executive.

DURHAM

THE UNIVERSITY

DEPARTMENT OF ENGINEERING SCIENCE

SHELL OAS RESEARCH SCHOLARSHIP in MICROPROCESSOR APPLICATIONS

Applications are invited for a British Gas Research Scholarship in Microprocessor Applications tenable for three years from October 1980. The work will concerns the development of pipeline corrosion control and monitoring systems which will be carried out in conjunction with the Welsh Gas Board in Swansea and Research Station in Killingworth, Newcastle-upon-Tyne.

Candidates should be citizens of the United Kingdom and should hold or expect to obtain a good Honours degree (1st or 2.1) in Engineering or Physics. They should preferably have had experience of the use and application of microprocessors. The successful candidate will join an existing team working on relative digital computers, and will be expected to register for a higher degree.

Remuneration will be at a level equivalent to a Research Assistant's studentship rates, plus an additional £600 per annum.

Applications, with curriculum vitae and the names of two referees, should be sent to Dr. F. Rose, Department of Engineering Science, University of Durham, Science Site, Durham DH1 3LE, by 30th June, 1980.

SHEFFIELD

THE UNIVERSITY

UNIVERSITY LIBRARY

RESEARCH ASSISTANT IN BIOCHEMISTRY OF IMMUNOLOGY

A full-time post in the Biomedical Information Service is offered to a man or woman graduate in Biochemistry or Immunology preferably with at least 2 years' laboratory or industrial experience to extend the Farmer Computer Based Information Service which has now developed coverage in Cell Biology and Biochemistry in addition to the original emphasis in the immunological and haematological and immune systems and natural and synthetic antibodies. In general will be investigating new information sources to be launched in January 1981.

The appointment will be for one year with the first instance from July 1980 but may be extended. Salary: £3,078 to £3,522 per annum (Assistant Grade) plus London Allowance £550 per annum. Applications, with curriculum vitae and the names of two referees, to Mrs. Ann Farmer, Biomedical Information Service, Dept. of Biochemistry, Medical School, Beech Hill Road, Sheffield S10 2RX.

ULSTER

THE NEW UNIVERSITY

RESEARCH ASSISTANT

The University invites applications for the post of RESEARCH ASSISTANT for a period of one year from July 1980 to assist with the Kane Kennedy on a SSRC-funded project concerning the Irish Question 1900-1976. The candidate, based at the University's Institute of Continuing Education in Londonderry, should have a degree in Modern Irish History or cognate subject, preferably with some knowledge of oral history methods. Knowledge of Irish Society would be an advantage.

Salary: £3,103 to £3,062 per annum (scale 1).

Further particulars may be obtained by telephoning the Registrar, The New University of Ulster, Coleraine, Co. Londonderry (Tel. No. 0265 44141, extension 2202). Closing date for applications will be 30 June, 1980.

NOTTINGHAM

THE UNIVERSITY

SCHOOL OF AGRICULTURE

DEPT. OF APPLIED BIOCHEMISTRY & NUTRITION

RESEARCH ASSISTANTS

Applications are invited for two posts of RESEARCH ASSISTANT. The projects are directed to investigate the detailed biochemical morphology and physical structure of both potato and wheat starch granules in relation to their function and will employ a variety of modern biochemical and biophysical techniques. An experience with a knowledge in biochemistry or chemistry or physics will be permitted to register for the degree of Ph.D. The starting date will be October 1st.

Salary on the 1st scale for Research Assistants, Assistant staff £4,404-5,022 p.a.

Application forms and further particulars may be obtained from Dr. J. D. Marshall, Department of Applied Biochemistry & Nutrition, School of Agriculture, University of Nottingham, Sutton Bonington, Loughborough, Leics. LE12 5RD.

PART-TIME BIOLOGY LECTURER

ITHACA COLLEGE

Requires a Lecturer for a first year BIOLOGY course for academic year 1980-81 beginning September 1.

Please send curriculum vitae, to Director of the Venetian Institute, Ithaca College, Palazzo Cenobio Dandolo, Giardini Giardini, Venezia.

Announcements

SOCIETE des Poetes et Artistes de France — Annual Dinner (Members only) Friday, 27th June, Claridge's. Reception 7.30 for 8 p.m. Dinner 8.30 sharp. Apply Secretary, 01-836 3969 (evenings).

Colleges and Institutes of Higher Education

YMCA NATIONAL COLLEGE

In association with North East London Polytechnic Applications are invited for the new post of:

TUTOR/ORGANISER IN YOUTH & COMMUNITY WORK

with responsibility for a

DISTANCE TEACHING DEVELOPMENT PROJECT

Grade:
Burnham F.E. Senior Lecturer (£7,092 to £8,871) (under review) plus London Allowance.

Location:
Based at YMCA Nadonal College but some travel outside London essential.

Duties
(a) Initially to undertake a feasibility study into the proposed part-time Certificate Course in Youth and Community Work by distance teaching.
(b) To prepare for, and operate, the first such course.

Qualifications:
Qualifications and substantial experience in Youth and Community Work and/or related fields.

Duration:
Initially for one year, the DES Development Grant will be extended (given a positive feasibility study) to cover the duration of the first course.

Further particulars and application form available from:
The Principal,
YMCA National College,
642 Forest Road, London E17 3DP
(Closing date for applications Monday, 9th June).

Inner London Education Authority

SOUTH WEST LONDON COLLEGE,
Tooting Broadway, London SW17

Department of Business Education

PRINCIPAL LECTURER AND DEPUTY HEAD OF DEPARTMENT

Applications are invited for the above appointment from suitably qualified and experienced staff with a sound knowledge of BEC courses and their administration.

Salary scale: £8,256-£9,162 (bar—£10,362) plus £609 Inner London Allowance. Salary scale in accordance with the Burnham Further Education award and subject to formal approval. Further information and application form available from the Deputy Administrative Officer at the College to whom completed applications must be returned within 14 days of the appearance of this advertisement. (Ref. T.217.)

CANTERBURY

CHRIST CHURCH COLLEGE OF HIGHER EDUCATION

Applications are invited for the post of SENIOR LECTURER in ART and SCIENCES DIVISION.

The college offers B.A., B.Ed. and B.Sc. courses, advanced diplomas and higher degrees in education. The Head of the Arts and Sciences Division is responsible for the B.A. and B.Sc. degree programmes and other courses which do not lead to a teaching qualification.

Salary: Currently under review. Head of Department, £11,148 to £12,522 (Burnham Scale).

For further details please write to Mrs Jean Lang, Principal Secretary, to whom applications should be sent not later than 16th June.

Further details and application form, returnable within seven days from the appearance of this advertisement, obtainable from the Principal, Harrow College of Higher Education, Northwick Park, Harrow, HA1 3TP or telephone 01-863 5422, extension 1233.

HARROW

COLLEGE OF HIGHER EDUCATION

FACULTY OF ART AND PHOTOGRAPHY

SENIOR LECTURER

Salary: £7,191 to £9,039 under review. Inner London Weighting £609 p.a.

Applications are invited for the post of CO-ORDINATOR of COMPLEMENTARY STUDIES in developing and expanding a special Joint B.A.(Hons) degree (offered by the planning group). The course offers diploma level work, and a three 'foundation' studies course.

HEREFORD AND WORCESTER

COUNTY COUNCIL

WORCESTER COLLEGE OF HIGHER EDUCATION

TEMPORARY APPOINTMENT OF LECTURER IN CHEMISTRY

Applications are invited for the above post in the Division of Science (School of Science) from candidates to lecture in the College Diploma in Science programme, validated by C.N.A.A. The appointment will be temporary from 1st September, 1980, until 31st August, 1981, to replace a letter on study leave.

Candidates should have particular interest and expertise in inorganic and nuclear chemistry although the appointment requires the ability to teach in all branches of chemistry.

The salary will be at an appropriate point in the Lecturer II/Senior Lecturer Scale (at present £6,606 to £8,871 according to age).

Application forms and further details from the Departmental Secretary, Worcester College of Higher Education, Henwick Grove, Worcester WR2 6AJ.

Colleges and Institutes of Technology

RGIT

ROBERT GORDON'S INSTITUTE OF TECHNOLOGY, ABERDEEN

SCHOOL OF BUSINESS MANAGEMENT STUDIES

LECTURER

BUSINESS ADMINISTRATION MANPOWER STUDIES

Qualifications:
Relevant UK University or CNAA Degree essential preferably in relevant fields of Psychology and/or Economics.

Experience:
Minimum five years' industrial/commercial experience desirable.

Duties:
Participate in operation and development of degree, postgraduate/post experience courses.

Salary in range:
£4,754-£9,020 per annum (under review). Assistance with removal expenses.

Details from: Secretary, Robert Gordon's Institute of Technology, Schoolhill, Aberdeen, AB9 1FR (0224-574811)

NEWHAM
(London Borough of)

EAST HAM COLLEGE OF TECHNOLOGY
High Street South, London E6 4ER
Principal: K. E. Bishop B.Sc. (Econ.), F.R.S.A.

DEPARTMENT OF ART AND DESIGN

LECTURER (—30 DESIGN

A vacancy will occur in September for a Three-Dimensional Designer to teach in the Department Art and Design across the Department. This will include Foundation and OATEC general courses.

It is hoped to appoint a person of drive and enthusiasm who can offer a wide range of 3D skills including ceramic and construction work.

Teaching experience at this level would be an advantage and the candidate should be able to demonstrate an interest in the developments in this area.

Salary (under review): £4,071 to £6,801 per annum plus £609 London allowance.

Application forms and further details may be obtained by writing to the College Administrative Officer enclosing a self-addressed envelope. Completed forms should be returned within 14 days of the appearance of this advertisement.

Colleges of Further Education

Cornwall Education Committee

Cornwall Technical College, Redruth
Principal: Dr. K. Farnell

FACULTY OF ART AND DESIGN

Applications are invited for the following three posts:

1. Lecturer Grade II in Scientific Illustration
to contribute to the CNAA BA Hons Degree Course in Scientific and Technical Graphics.

Applicants should have appropriate qualifications and experience as practising illustrators.

2. Lecturer Grade II in Photography
the successful applicant will be expected to teach the creative use of photography, as well as the basic principles of practical work, to students of Graphic Design, Technical Illustration and Ceramics, on a fourth year SIAD Diploma level, and contribute to the BA Hons Degree Course in Scientific and Technical Graphics. He/she will also be responsible for the day-to-day running of the photography section. Applicants should have good academic qualifications as practising photographers.

3. Lecturer Grade I in Ceramics
the successful applicant who should have substantial professional experience, as a designer/craftsman of women, will be required to contribute to DATEC Diploma and Higher Diploma studies. In Ceramics (This appointment might, in the first instance, be a temporary full-time post).

In all three cases previous teaching experience would be a strong advantage.

Salary Scale:
Lecturer Grade II £4,606-£7,885
Lecturer Grade I £3,759-£6,498
according to qualifications and experience.

Further details and application forms may be obtained by sending a stamped, addressed envelope to the Principal, to whom completed forms should be returned by Monday, 16th June, 1980.

FOR INFORMATION
on subscriptions to the THES please write to the Subscription Manager, The Times Higher Education Supplement, P.O. Box 7, New Printing House Square, Grey's Inn Road, London WC1X 8EZ

Holidays and Accommodation

ASCHASOLOGY IN ISRAEL. Organise expeditions. A holiday with a difference. Tel. 01-202 5745 (7 to 9 pm). Project 67, 33a Upper Richmond Rd., W.C.1. 01-352 1263.

SUNKHOUSE.—Snowdonia. Food, bar. Instructors. Equipment. Transport. Groups, individuals. Lighter Days, Llanaelhaiarn, Llanystumdwy, Cricieth (0766) 810042.

For Sale and Wanted

OXFORD.—Studio for Sale. 1 bedroom, 2 reception, kitchen, patio (ring garden). Suit pied-a-terre. Mr. Graham 0-242 1685 (work).

Overseas

THE UNIVERSITY OF WINNIPEG
invites applications and nominations for the position of

PRESIDENT

The president has general responsibility for the operations of the University and has such other powers and duties as are assigned by the Board of Regents.

The University of Winnipeg was officially established in 1967, but its history dates to 1871. Located in downtown Winnipeg, the University is a provincially supported, primarily undergraduate institution which retains affiliation with the United Church of Canada. Total enrolment is about 8000, almost evenly divided between full-time and part-time students.

The appointment will be effective July 1, 1981. The salary and terms of the office are negotiable. The successful candidate should have a proven record of senior responsibility in education, business, health services or public administration.

Applications should be accompanied by a detailed curriculum vitae and the names of several referees. Letters of nomination should include biographical details of the nominee. Preference will be given to Canadian citizens. Applications, nominations and enquiries should be directed, before October 15, 1980, to:

J. K. A. Brown, Secretary
Search and Nominating Committee
University of Winnipeg
515 Portage Avenue
Winnipeg, Manitoba R3B 2E8
Telephone: (204) 786-7811, extension 437

THE NEW SOUTH WALES INSTITUTE OF TECHNOLOGY SYDNEY, AUSTRALIA

PRINCIPAL LECTURER/ SENIOR LECTURERS (2)

Faculty of Humanities & Social Sciences

The New South Wales Institute of Technology is established to provide a wide range of courses for those entering or already employed in industry, government and technological fields. Applications are now invited for the above positions.

The faculty offers a B.A. (Communication) degree, provides service courses for other faculties in various humanities and social sciences, has postgraduate students, the professional teaching is supported by an effective Media Centre, whose students include successful production experience in radio, T.V., and film.

Applicants will be expected to accept responsibility for some of the management and development of significant areas in the academic work of the Faculty.

Applicants should have high academic qualifications (normally a second degree or its equivalent); experience in teaching, research and administration; and/or, where appropriate, experience in professional practice. The Institute will particularly welcome applications from persons qualified in areas such as Interpersonal and Intercultural Communication, Applied Psychology, Television, Film, Acting and Speaking.

Salaries for these positions are as follows:—
Principal Lecturer: $A27,963 (Level 1) p.a.
$A26,076 (Level 2) p.a.
$A30,105 (Level 3) p.a.
Senior Lecturer: $A22,542-$A25,522 p.a.

Fares and a contribution towards removal and initial accommodation expenses are provided for overseas appointees. A Housing Loan Scheme is also available. With consent of Council academic staff are permitted to undertake limited consulting work.

Applications close on 4th July, 1980. Applicants should arrange for two confidential referees reports to arrive by the same date. Applications should include address, phone number, personal particulars, documentary evidence of qualifications, work and teaching experience, published publications and the names of those referees nominated.

Applications and referees reports are to be sent to:—
The Agent General for N.S.W.
N.S.W. Government Offices
66 Strand
London WC2N 5LZ
ENGLAND

QUEENSLAND INSTITUTE OF TECHNOLOGY
SCHOOL OF LAW

PRINCIPAL LECTURER IN LAW

The School of Law conducts an LL.B. course (four years full-time; six years part-time) which is recognised by the Barristers' Board and the Solicitors' Board. There are about 800 enrolled students and the first LL.B. students to graduate will do so at the end of 1980.

As well as having an appropriate teaching programme, a Principal Lecturer has significant administrative duties. The successful applicant may be required to act for the Head of School during his absence.

Applicants should have good academic qualifications in Law, including a higher degree or equivalent, relevant experience in professional practice and substantial teaching experience in a tertiary institution. A demonstrated aptitude for academic administration will be an advantage.

Salary: $A27,963; $A28,975 or $A30,105 p.a. depending on qualifications and experience. Further information may be obtained from the Head of School.

The Head of School may be in London to conduct preliminary interviews during the first half of July, 1980.

Applications quoting Y.52/80 and stating personal details, including telephone number, qualifications, experience and present employment, together with a recent photograph, documentary evidence of qualifications and the names and addresses of at least two referees, should reach the Personnel Officer, QIT, 2 George Street, Brisbane 4000 Australia by 2nd June, 1980.

International Development Research Centre
Centre De Recherches Pour Le Developpement International
CANADA

The International Development Research Centre is a public corporation, created by the Parliament of Canada to support research designed to adapt science and technology to the needs of developing countries. The Centre is presently recruiting a:

PROGRAMME OFFICER IN EDUCATION

Functions:
Identification, assessment, development and monitoring of research projects in education within the social sciences discipline.

Qualifications:
Ph.D. or equivalent. Professional familiarity with the education and development research literature. Personal specialization in at least one area such as education and the labour market, the political economy of education, or the social organization of schools and classrooms. Research experience in Latin America, Africa or Asia. Fluency in English and working ability in Spanish or French.

Location:
Ottawa, with frequent travel for periods of two to three weeks (approx. 30 per cent over the year).

Salary:
Fully commensurate with qualifications and experience.

Starting date:
September 1, 1980.

Applicants should submit their résumé before June 30, 1980, to: Personnel Office, International Development Research Centre, P.O. Box 8500, Ottawa.

THE BRITISH COUNCIL

EDUCATIONAL POST OVERSEAS

SENIOR LECTURER IN ENGLISH LITERATURE (PLANT)

INSTITUTE OF ENGLISH STUDIES
UNIVERSITY OF LOOZ

To teach ENGLISH LITERATURE with historical perspectives and ENGLISH COMPOSITION.

Qualifications: Ph.D. in English Literature or equivalent and at least three years' university teaching experience.

Date of appointment: September, 1981.

Salary: £8,160 to £11,294 per annum.

Benefits: free accommodation; employer's contribution to superannuation scheme; overseas allowance equal to one-third of basic salary; contract, renewable.

Return fares are paid. Local contracts are guaranteed by the British Council. Those who bring young families will find good and lowcost boarding accommodation available. Reference number 19 Z 2 and title of post must be quoted on application forms to the British Council Recruitment Office, 10 Spring Gardens, London SW1A 2BN.

ETHIOPIA

ADDIS ABABA UNIVERSITY

Applications are invited for recruitment and appointment to the following positions in the Faculty of Commerce: ECONOMICS, ACCOUNTING, BUSINESS ADMINISTRATION, MARKETING, MANAGEMENT SCIENCE, AGRICULTURAL ECONOMICS, AGRICULTURAL ECONOMICS, ECONOMETRICS, ENGLAND ECONOMICS and ENGLISH, to teach in the undergraduate and postgraduate programmes. The language of instruction is English. Applicants should hold at least a Master's degree or equivalent qualifications in their fields and should have at least three years' teaching experience.

Relating are lect-tror. and rumps from 14,400-24,000 Ethiopian Dollars per annum (£3,000-£5,000; £6-£10 sterling) and expatriate benefits. A housing allowance or free accommodation is also provided.

Letters of application, including curriculum vitae, should be addressed to the Academic Vice-President, Addis Ababa University, Addis Ababa, Ethiopia, from whom further information may be obtained.

LECTURER

Agricultural Management - Marketing SWAZILAND

Mananga Agricultural Management Centre

MAMC is an international management training centre with an established reputation in the developing countries.

More than 35 developing countries have now sent students, usually in the age range 30-45, to attend the post-experience courses offered by the centre at middle and senior management level.

The principal course is a 3 month general management course but other shorter general management and specialised courses are also offered.

Teaching practice follows that of major *international business management* centres but is oriented towards tropical agricultural management. Emphasis is placed on participatory methods of instruction with extensive use of management exercises, case studies and related seminar activities.

The marketing content of the courses at MAMC is being extended and it is proposed to appoint a lecturer with a marketing background in relation to large and small scale tropical agricultural systems.

A degree in Agriculture, Agricultural Economics or Economics is essential together with relevant practical overseas experience. A post graduate qualification in Economics or Management (eg. DMS or MBA) would be an advantage.

This is a CDC appointment and could be on fixed term contract/gratuity or pensionable terms. Salary is negotiable and *normal CDC conditions and allowances for overseas based staff apply.*

Applications giving full personal particulars and details of qualifications and experience should be sent to Head of Personnel, Commonwealth Development Corporation, 33 Hill Street, London W1A 3AR, quoting Serial 2064.

Commonwealth Development Corporation

UNIVERSITY OF SINGAPORE

FACULTY OF ENGINEERING

Applications are invited for teaching appointments in the following departments from candidates with relevant postgraduate qualifications and teaching/research experience:

Chemical Engineering
Civil Engineering
Electrical Engineering
Industrial and Systems Engineering
Mechanical and Production Engineering

Gross annual emoluments range as follows:

Lectureship:	S$20,900-41,590
Senior Lectureship:	S$35,940-62,220
Associate Professorship:	S$54,080-72,240
Professorship:	S$66,430-85,180

the point of entry depending on the level of appointment and the candidate's qualifications and experience. These emoluments include a thirteenth month allowance payable in December of each year and allowance recommended by the National Wages Council for 1978 and 1979. (US$1 equals S$2.18 approx.)

For staff appointed on normal contract, emplacement on the permanent establishment will be considered after two 3-year contracts. Leave and medical benefits are provided. Under the University's Academic Staff Provident Scheme, the staff-member contributes at the present rate of 18½ per cent of his salary subject to a maximum of S$485/- p.m., and the University contributes 20½ per cent of his monthly salary. (The sum standing to the staff member's credit in the Fund may be withdrawn when he leaves Singapore/Malaysia permanently.) Other benefits include: a setting-in allowance of S$1,000-2,000 depending on circumstances, subsidized housing at rentals ranging from S$100-350 p.m., passage assistance and baggage allowance for transportation of personal effects to Singapore.

Candidates should write to:

The Registrar, University of Singapore, Kent Ridge, Singapore 0511, giving their curriculum vitae and also the names and addresses of three referees.

Closing date: 30 June, 1980.

SCHOOL OF BUSINESS ADMINISTRATION

Professors or Associate Professors are required to participate in the undergraduate and graduate programmes and the development of a new part-time MBA programme. A Ph.D. is required along with professional interest in one or more of the following areas:—

Accounting
Finance
Management Science
Marketing
Management Systems
Organizational Behaviour

Research and consulting are encouraged. Rank and salary will be commensurate with qualifications and experience.

Lakehead's business students this past year ranked in the top six in a national business schools competition. Thunder Bay is a city of 110,000 located on the shores of beautiful Lake Superior with numerous cultural and recreational attractions.

Please send curriculum vitae and the names of three references to: D. E. Ayre, Secretary of the University, Lakehead University, Oliver Road, Thunder Bay, Ontario P7B 5E1, Canada.

Lakehead University

Universities continued

Director—Microelectronics

Educational Development Centre

This is a newly created professorial level post reporting to the Principal of Paisley College of Technology. The Scottish Education Department is providing substantial and on-going funds to the College to create and develop a Centre whose prime purpose will be to act as a locus for educational developments related to Microelectronics technology and its practical application to industry. The Director's key responsibilities will be to:

(a) complement the provision of university courses by providing courses for technologists and technicians;

(b) keep abreast of new developments in Microelectronics and to disseminate information throughout post-school education;

(c) take a lead in building an active network of co-operative activities, in order to create an adequate supply of properly educated manpower;

(d) provide in-service courses for lecturers in Microelectronics, and to develop materials for use in courses held in other colleges;

(e) recruit a team of high calibre staff capable of teaching, sometimes on a short timescale, to requests for courses to meet specific needs;

(f) maintain close liaison with the existing College departments which already have well established contacts with Scottish industry, and to develop these contacts further.

Although these primary tasks are directed towards a rapid and widespread growth in the national provision of skilled manpower, there will also be opportunities for research and consultancy work and encouragement will be given to publish relevant papers.

The rewards include a competitive salary, generous annual leave, a good contributory pension scheme, car mileage allowance, reasonable expenses, and assistance if required with costs of relocation.

Men or women applying for this post must be able to demonstrate team leadership abilities and will probably be in the age range 32—45. Their proven ability to teach other people at every level and to win their respect will be based on sound knowledge of the practical application of Microelectronics. The successful candidate will have every opportunity for personal growth through contributing effectively to the revitalisation of Scottish industry.

(PA Personnel Services Ref: GM50/7343/TES

Initial interviews are conducted by PA Consultants at convenient centres. No details are divulged to clients without prior permission. Please send brief career details or write for an application form, quoting the reference number on both your letter and envelope, and advise us if you have recently made any other applications to PA Personnel Services.

PA Personnel Services

Fitzpatrick House, 144—148 Cadogan Street, Glasgow G2 6QP. Telephone: 041-221 3954 Telex: 779148

A Member of PA International

UNIVERSITY OF SINGAPORE

DEPARTMENT OF ENGLISH LANGUAGE & LITERATURE

Applications are invited for appointment to Lectureship/Senior Lectureships in English Language in the Department of English Language and Literature.

Applicants should have a sound background in English Linguistic study. Preference will be given to those with a Ph.D. degree, but applicants with appropriate Masters degrees and with established doctoral research in progress will be seriously considered. The Department has launched a programme of academic study leading to an honours degree in English Language and is rapidly extending the range of courses offered, covering descriptive and historical work, stylistics and applications of language study. Candidates should indicate their teaching experience and areas of interest and specialization.

Apart from teaching, appointees are expected to be involved in the planning of courses, construction of materials, research and other matters related to courses offered in the Department.

Annual emoluments will be in the range from S$20,900 to S$62,220 approximately, point of entry depending on the level of appointment and the candidate's qualifications and experience. These emoluments include a 13th month allowance of one month's salary in December of each year and allowances recommended by the National Wages Council for 1978 and 1979.

For staff appointed on normal contract, emplacement on the permanent establishment will be considered after two 3-year contracts. Leave and medical benefits are provided. Under the University's Academic Staff Provident Scheme, the staff member contributes at the present rate of 16½ per cent of his salary subject to a maximum of S$4967.- p.m., and the University contributes 20½ per cent of his monthly salary. (The sum standing to the staff member's credit in the Fund may be withdrawn when he leaves Singapore/Malaysia permanently.) Other benefits include a settling-in allowance of S$1,000-2,000 depending on circumstances, subsidized housing at rentals ranging from S$100-350 p.m., passage assistance and baggage allowance for transportation of personal effects to Singapore.

Candidates should write to: The Registrar, University of Singapore, Kent Ridge, Singapore 0511 giving their curriculum vitae, and also the names and addresses of three referees.

(21 equals $3.90 approx.)

Closing date: 15 July, 1980.

UNIVERSITY OF CAPE TOWN

DEPARTMENT OF BUSINESS SCIENCE

SENIOR LECTURER/LECTURER IN PERSONNEL MANAGEMENT

Applications are invited for the above post. Appointments will be made in accordance with qualifications and experience, on the salary scale of either Senior Lecturer: R31,400 x R600-R18,800 - p.a. or Lecturer: R8,100 x R480-R9,900 x R600-R13,200 p.a. (These scales are to be increased with effect from 1st April, 1980. In addition, a service bonus equal to nearly one month's salary is payable annually.)

Applications will be considered for permanent appointment or for contract appointments for periods from one to three years. Candidates should have good academic qualifications, preferably with major interests in Organisational Psychology, Training Management, or Manpower Planning/Development, as well as practical experience in Personnel Management, including work in Industrial Relations.

Applicants should submit a curriculum vitae stating age, present salary, relevant business or teaching experience and research interests and publications, when available if appointed, and the names and addresses of three referees.

Further information should be obtained from the Registrar, Room 16, University of Cape Town, Private Bag 6, Rondebosch 7700, South Africa, by whom applications must be received not later than 30th June, 1980.

The University's policy is not to discriminate in the appointment of staff or the selection of students on the grounds of sex, race, religion or colour. Further information on the implementation of this policy is obtainable from the Registrar.

Please send me The Times Literary Supplement for one year to:

NAME

ADDRESS

Enclosed is my cheque for

SIGNATURE Date

TLS

Return this coupon to:
The Subscription Manager,
The Times Literary Supplement,
New Printing House Square,
Gray's Inn Road,
London WC1X 8EZ.

UNIVERSITY OF ZIMBABWE

Applications are invited for the following posts:—

LECTURESHIPS/SENIOR LECTURESHIPS

Accountancy (three posts): Qualified accountants to teach courses in accounting, auditing, data processing, business mathematics, management accounting and control, tax law and practice.

Division of Biological Sciences (two posts): (a) Ecologists with interests in plant communities to take part in running the MSc Course in Tropical Resource Ecology as well as some undergraduate teaching; (b) Ecologists interested in large mammals to take part in the running of the MSc Course in Tropical Resource Ecology as well as some undergraduate teaching.

Animal Health: A veterinarian or animal scientist with suitable equivalent qualifications is needed to teach courses in Animal Health and an introduction to the Anatomy and Physiology of farm animals with special reference to beef cattle.

History (three posts): Suitably qualified applicants with a specialist interest in: (a) Comparative Imperialism and World History; (b) the economic history of the Industrialised world, with particular reference to America, Eastern Europe, Russia and China; (c) the history of Russia, the Americas and Asia.

Educational Technology Unit: Applicants should be experienced educationists, preferably with a postgraduate qualification in Educational Technology and have a practical bent, in order to provide the Faculty of Education with courses and advice on educational technology and AVM, ranging from sophisticated to basic equipment and materials.

Pharmacy: Applicants should be Pharmacy or Chemistry graduates with a higher degree and research and teaching experience in Pharmaceutical and Medical Chemistry. This incumbent will be responsible for the organic chemistry components in the Pharmacopoeia Course, Part I and Part II courses which are respectively part of the B.Pharm Part II and Part III courses.

Salary Scales (Approx. sig. equivs.): Senior Lecturer £9,471 x £10,494 x £363-£12,111; Lecturer Grade I £6,540 x £455-£8,966; Junior Grade £4,701 x £355-£5,176. Appointees on these scales according to qualifications and experience.

Conditions of Service

Both permanent, pensionable terms and short-term one or two-year contracts are offered.

Permanent Pensionable Terms: Family passages and allowances (part-transport of effects on appointment (installation loss of up to 25% of one year's salary if required for persons recruited from outside Zimbabwe. Unfurnished accommodation is guaranteed for a period of at least three years for persons recruited from outside Zimbabwe. Sabbatical and triennial visits with travel allowances. Superannuation and medical aid schemes.

Short-term contracts: Family passages and allowances towards transport of effects. Assistance with accommodation for persons recruited from outside Zimbabwe.

FACULTY RESEARCH FELLOWSHIPS

Social Studies (two posts): Suitably qualified persons, preferably with a doctoral degree, for Research Fellowships tenable in the Faculty of Social Studies. Two posts are established. One will be given in September and the other in December, 1980. For each post, appointment would be for one year in the first instance with the possibility of renewal for a second year. Intending applicants should send for information on the research in progress in the relevant department within the Faculty (Centre for Applied Social Science, Economics, Psychology, Political Science and Sociology) before submitting a research proposal.

Pharmacy: Suitably qualified graduates for Research Fellowships in the Department of Pharmacy in the Faculty of Medicine. Appointment will be for one year in the first instance. Intending applicants should write to the Head of the Department in the University for information on the research in progress.

Salary Scales (Approx. sig. equivs.): Research Fellow Grade II £5,797 x £105-£6,211; Research Fellow Grade I £6,666 x £347-£8,041; Senior Research Fellow £7,579 x £347-£10,008.

TECHNICIAN

Chief Technician, Faculty of Science Electronics Workshop: Applicants must hold City and Guilds Finals (Part III) in Industrial Measurement and Control or Telecommunications or their equivalent. Hand experience with analogue and digital circuitry is required. Job involves servicing and repair of existing equipment and design and development of a wide range of electronic equipment.

Salary Scale (Approx. sig. equivs.): £5,918 x £292-£7,046 x £320-£8,086.

Conditions of Service

Family fares and allowances for transport of effects for persons appointed from outside Salisbury. Pension and Medical Aid Schemes. Attractive leave conditions.

Applications (six copies required) giving full personal particulars including full name, place and date of birth, sex, qualifications, employment and experience, present salary, publications, date of availability, and the names and addresses of three referees should be sent to: The Appointments Officer (Staff), University of Zimbabwe, P.O. Box MP 167, Mount Pleasant, Salisbury, Zimbabwe, from whom further particulars may be obtained. Please state clearly for which post application is being made. A copy of application should be sent to the Association of Commonwealth Universities (Appts), 36 Gordon Square, London WC1H 0PF. Closing date for receipt of applications is 30 June, 1980.

UNIVERSITY OF PAPUA NEW GUINEA

(Port Moresby)

Applications are invited for the post of:

SENIOR LECTURER/LECTURER IN ANIMAL NUTRITION

in the Department of Agriculture. Applicants should have a good first degree in Agriculture or Veterinary Science together with post-graduate experience in Animal Nutrition and/or Biochemistry, preferably at the PhD level. Preference will be given to those with University teaching and research experience in Animal Nutrition. The appointee will be responsible for courses in Biochemistry and Animal Nutrition up to Honours Degree level and may be required to assist in other courses according to expertise and interest. He/she will be expected to supervise postgraduate, and to pursue independent research. The appointee may also be asked to assist with general production projects at the Departmental Farm, and to undertake other relevant duties as may be assigned from time to time. Currently the Department of Agriculture is between Port Moresby and Laloki but the intention, in the near future, is to unify the Department in the first instance the appointee will be located in Lae.

Salary scales: Senior Lecturer K16,518 p.a. plus gratuity. Lecturer K12,600 p.a. plus gratuity. Lecturer Grade I K11,200 p.a. plus gratuity. (Kina = $1.36.)

Conditions of Service: Three-year contract. Support for approved research, reduced accommodation; family passages; baggage allowance; annual overseas leave; education subsidies; university contribution scheme to doctoral extended fitness and disability; applicants who wish to arrange secondment from their home institutions will be welcomed. Detailed applications (five copies) with curriculum vitae and names of three referees to be sent direct to: Assistant Secretary, Box 4839, University of Papua New Guinea, by 21st June, 1980.

Applicants resident in the UK should also send one copy to: Inter-University Council, Tottenham Court Road, London W1P 0GT. Further details may be obtained from either address.

UNIVERSITY OF WESTERN AUSTRALIA

Perth

DEPUTY VICE-CHANCELLOR

(Finance and Services)

The University of Western Australia has recently undertaken a reorganisation of its senior executive structure and has created a second post of Deputy Vice-Chancellor. The Deputy Vice-Chancellor (Finance and Services) will be responsible to the Vice-Chancellor for the co-ordination of the administration of all matters relating to the financial and property policies of the University. The duties extend to the overall responsibilities including the right of the Bursar, Architect, Estates and Finance Officer and recommendation to the Vice-Chancellor on the allocation of resources (e.g. annual budget) between the Government, accommodation, Council, Chairmanships and the Academic Policy Committee and regional centres. Australian citizenship either permanent or by qualifying period is required. The position offers great opportunities for the person to make a major contribution to the overall management of a large university. Relocation expenses will be paid.

The other Deputy Vice-Chancellor (Academic) will be primarily concerned with academic matters and the relationship between the academic and the administrative. It is hoped that the second appointment will be made in the first instance, the appointee will be able to take up the appointment towards the end of 1980.

Persons interested in the post should write or telephone for a copy of the names for consideration and be invited to the Vice-Chancellor, The University of Western Australia, Nedlands 6009, Western Australia.

Further information can be obtained on the appointment from the Secretary, Association of Commonwealth Universities (Appts), 36 Gordon Square, London WC1H 0PF.

Universities continued

THE CITY UNIVERSITY

The Sir John E. Cohen Chair in Consumer Studies

This Chair has been endowed by a benefaction from the Sir John and Lady Cohen Charitable Foundation. It will be tenable in the Business School of the University.

The person appointed will be responsible for teaching on established courses at both undergraduate and postgraduate level and for initiating and developing new courses and research in various aspects of consumer behaviour and its application to practical problems. The mounting of short courses in this field for senior managers in the City, Industry and the Retail Trades is seen as an important part of the work. The successful candidate will probably have qualifications in economics, statistics or psychology and should have established a reputation in teaching and research.

Salary will be in the range for Professorial Staff in Universities — minimum £12,824 per annum, average £14,997 per annum plus £740 London Allowance and superannuation benefits.

Further particulars of the appointment and application forms may be obtained from the Academic Registrar, The City University, Northampton Square, London EC1V 0HB. Telephone 01-253 4399, Ext. 251.

Anyone interested in discussing the appointment before submitting an application should get in touch with the Dean of the Business School, Professor John Treasure. Telephone 01-253 4399, Ext. 379.

University of Ibadan

Faculty of Medicine

Applications are invited from suitably qualified candidates for the following posts in the Department of Pharmacy of the Faculty of Medicine, University of Ibadan:

(i) Professor
(ii) Reader
(iii) Senior Lecturer
(iv) Lecturer Grade I/II

QUALIFICATIONS:

(i) Professor:
(a) At least 10 years' teaching or professional experience in a University, an Institution of University standing or comparable Professional Institution.
(b) Ability to initiate and develop research projects.
(c) Some recognised publications in Learned Journals.
(d) Experience in directing academic group discussions.
(e) Preferably some experience in inter-disciplinary groups.
(ii) Candidates should in addition to the above hold a good honours degree and Higher Degree, i.e., M.Sc./M.Phil./Ph.D. in any of the following areas: (a) Pharmaceutical Chemistry; (b) Pharmaceutical Microbiology; (c) Pharmaceutics and Pharmaceutical Technology; (d) Pharmacognosy.
(iii) Reader:
(a) At least (4) above but with seven years' teaching or professional experience in a University, an Institution of University standing or comparable Professional Institution.
(iv) Senior Lecturer:
(a) At least (4) with five years' teaching or professional experience in a University, an Institution of University standing or comparable Professional Institution.
(v) Lecturer Grade I:
(a) At least three years' experience in teaching or research in a University, an Institution of University standing or a comparable Professional Institution. Within one of these two years teaching or research in a University, an Institution of University standing or comparable Professional Institution would suffice. Some recognised publications will be an advantage. In addition candidates should hold a good honours degree and a Higher Degree in at least one of the areas specified in (ii) (iv) above.

SALARIES: Duties will include teaching and research work and some other duties as the successful candidates may be required to perform by the University Authorities.

SALARY GRADES: Professor G.L. 16—N11,568 x N526-N12,790; Reader G.L.—14—N10 296 x N518-N11,356; Senior Lecturer G.L. 13—N8,966 x N466-N9,824; Lecturer Grade I G.L.—12—N7,604 x N218-N8,062; Lecturer Grade II G.L.—10—N6,760 x N182-N6,760.

CONDITIONS OF SERVICE: Appointment which is either on pensionable or contract basis, would commence as soon as possible. Non-pensionable appointees below the rank of Professorship will be on probation for the first three years and will be considered for confirmation in writing age thereafter if their services are considered satisfactory. Leave, Passage grant, Pension Scheme and partly furnished accommodation, or rent allowance not exceeding 54% of salary or rent allowance of between N480 and N720 per annum in lieu. Contract appointees will be entitled to contract gratuity, on their basic salary payable with salary, and contract gratuity, payable at the end of each year.

METHOD OF APPLICATION: Four typewritten copies of curriculum vitae giving following details: (i) Full name; (ii) Place and date of birth; (iii) Nationality and marital status; (iv) Number and age of children; (v) Permanent home address; (vi) Academic qualifications; (vii) Detailed list of publications indicating (a) authorship whether single or joint; (b) names of journals in which they are published; (c) dates of publication; (viii) Detailed description of research interests; (ix) Present salary; (x) Other activities outside University; (xi) Names and addresses of three referees; (xii) Date of availability for duties if appointed.

Applicants should request their referees to forward references on their behalf. Testimonials and referees' reports should be addressed to: The Registrar, Nigerian National Universities Commission, 190 Cook Road, LONDON W1P 8LE, not later than 30th June.

University of Melbourne

Research Fellowships

The University of Melbourne awards up to six fellowships (twice yearly) for full-time research in any department of the University.

Eligibility

Ph.D. or at least equivalent post-graduate research experience. Applicants must have completed their last postgraduate degree no more than five years previously. Maximum age 35.

Tenure

One year in the first instance with a possible extension for six or 12 months.

Salary

Research Fellow Grade 1—within the range—$A14,673-$A16,809.

Research Fellow Grade 2—within the range—$A17,024-$A22,364.

Travel

For fellow only—Economy class air fare to Melbourne and return to point of departure on expiry of Fellowship.

Applications

i) Name, address, age, details of dependants.
ii) Complete academic record.
iii) Present and past positions.
iv) Research experience in detail.
v) University department in which applicant wishes to work.
vi) Proposed area of research.
vii) Details of other finance available.

Referees

Applicants are requested to ensure that three referees forward their testimonials by airmail direct to the Deputy Vice-Chancellor (Research) by the closing date for applications.

Closing Dates

31st January and 31st July each year with the Deputy Vice-Chancellor (Research), University of Melbourne, Parkville 3052, Victoria, Australia.

The Papua New Guinea University of Technology

Department of Chemical Technology

Lecturer - Mineral Technology

Applications are invited for the above position. The Department conducts a course leading to the degree of B.Sc. (Mineral Technology). It is expected that applicants will have suitable qualifications in this area together with some professional experience.

Salary: K12,810-14,860 (Level 14 and 17)

Analysis Laboratory

Senior Technical Officer

Applicants would be required to have extensive experience in the use of Atomic Absorption, U.V. and Visible spectroscopy in the area of Analytical Chemistry, in reference to analysis of minerals, soils, foliers, water and foods etc., etc.

Salary: K9,840-10,960 (Level 6 and 10)

A 24 per cent gratuity is payable on all salaries shown (Kina = equals approx. Stg. .8280)

Initial contract period, three years. Other benefits include a gratuity equal of 24 per cent; appointment, repatriation and leave fares (staff member and family)) Settling-in and out allowances; Six weeks paid leave per year; Education fares and assistance towards school fees; Free housing. Salary continuation and medical benefit schemes available.

For information and conditions of service write to (quoting post): The Registrar, University of Technology, P.O. Box 793, Lae, Papua New Guinea. Applications close on 16th June, 1980.

THE AUSTRALIAN NATIONAL UNIVERSITY

Applications are invited from suitably qualified persons for appointment to the following position:

FACULTY OF ECONOMICS
CENTRE FOR RESEARCH ON FEDERAL FINANCIAL RELATIONS
RESEARCH FELLOW/ SENIOR RESEARCH FELLOW

Applicants should be well qualified to undertake research in public economics. Experience in the field of fiscal federalism is desirable.

The Centre for Research on Federal Financial Relations, which is financed by means of a special research grant from the Australian (Commonwealth) Government, is directed by Professor R. L. Mathews. The Centre undertakes, sponsors and publishes the results of research on all aspects of Australian inter-governmental financial relationships and on fiscal federalism in other federations. Appointment is for one year in the first instance, with the possibility of extension for a second year.

Closing date: June 30, 1980.

Conditions of Appointment

Salary on appointment will be in accordance with qualifications and experience within the range: Research Fellow: $A17,024-$A22,222; Senior Research Fellow: $A22,779-$28,364 per annum. Present exchange rates: $A1=UK 49p, $US 1.11. Applicants from those able to obtain leave of absence without pay from their own institutions will be welcomed.

Reasonable appointment expenses are paid. Superannuation benefits are available for appointees who are eligible to contribute. Assistance with finding accommodation is provided for an appointment from outside Canberra. The University reserves the right not to make an appointment or to make an appointment by invitation at any time.

Prospective applicants should obtain further particulars from the Association of Commonwealth Universities (Appts), 36 Gordon Square, London WC1H 0PF.

GRIFFITH UNIVERSITY

Australia

SCHOOL OF SOCIAL AND INDUSTRIAL ADMINISTRATION

LECTURER IN ECONOMICS

The School of Social and Industrial Administration is commencing teaching its Bachelor of Administration (BAdmin) degree programme in February, 1980. The programme is problem-oriented and inter-disciplinary in approach, and allows broad coverage of, and specialisation in various administrative processes in social, business, industrial, public and other organisations. The School's research activity likewise focuses on organisations in society, and on processes and structures in all forms of organisations.

Applications are invited for the above-mentioned position from persons with suitable qualifications in macro economics and international economic institutions. Applicants should have a particular interest in one or more of the following areas: trade, growth and development, international monetary theory and applications, east-west economic relations.

Applications are welcome from both quantitative and qualitative economists.

The appointee will be expected to teach in the first-year (Foundation) Programme, and to contribute to the planning and implementation of second- and third-year courses in economics. These courses will lead to a concentration which will cover econometric, international trade, comparative economics, growth and development economics, inflation and unemployment economics.

Candidates must hold appropriate higher degrees from recognized tertiary institutions. Salary, depending upon qualifications and experience, will be within the range for Lecturer: $A17,024-$A22,364 per annum. Benefits include superannuation, membership of the Invalid Pension Scheme, and assistance with housing. Costs of fares and reasonable removal expenses will be met for appointees from outside Brisbane.

Intending applicants should obtain further particulars, including application procedure, from the Association of Commonwealth Universities (Appts), 36 Gordon Square, London WC1H 0PF.

Closing date for applications is 15 June, 1980.

THE UNIVERSITY OF NEW SOUTH WALES

Sydney, Australia

Senior Research Officer or Senior Research Fellow

SOCIAL WELFARE RESEARCH CENTRE

An experienced researcher is sought to conduct and supervise research on income security and income maintenance in social welfare strategies. A higher degree in a relevant discipline is highly distinguishing, together with a distinguished research record in areas such as social welfare and taxation and/or economics. The appointee, is for an initial period of up to four years. (The position is not tenured.) For an appointee from overseas this University may provide assistance with fares and a contribution towards re-establishment expenses.

Further information may be obtained from Adam Graycar, the Centre's Director, P.O. Box 1, Kensington, N.S.W., Australia, 2033.

Salary per annum: Senior Research Officer: Within one of two grades $A17,024-$A21,313 or $A20,076-$A22,364. Senior Research Fellow: Within one of two grades $A22,779-$A25,222 or $A25,110-$A28,823. Commencing salary according to qualifications and experience.

Applications close 29 June, 1980. Full information including conditions of employment and method of application can be obtained from the Association of Commonwealth Universities (Appts), 36 Gordon Square, London WC1H 0PF.

THE UNIVERSITY OF SYDNEY

LECTURESHIP IN ENGLISH

Applications will be welcome in any field of English Literature (including Australian and American literatures).

Salary range: $A17,024-$A22,364 p.a.

Position is expected to be filled by a probationary appointment of three years capable of leading to tenure but the University's requirements for tenure are deemed to be self-security; tenure may be granted at time of appointment.

Applications including curriculum vitae, list of publications and names of three referees by 28 June, 1980, to the Registrar, University of Sydney, N.S.W., 2006, Australia, from whom further information, including information also available from Association of Commonwealth Universities (Appts), 36 Gordon Square, London WC1H 0PF.

THE UNIVERSITY OF NEW SOUTH WALES

Sydney, Australia

SCHOOL OF LIBRARIANSHIP

LECTURER

Applications are invited for appointment to a lecturer in Archives Administration/Records Management. High academic qualifications and experience in archives administration essential. Experience with records management and automated systems desirable. To lecture and conduct seminars at postgraduate level in the Diploma in Archives Administration and the Master of Archives Administration courses within the School.

This position is available on a fixed-term contract for three years.

Salary per annum: $A17,024 range $A22,634. Commencing salary according to qualifications and experience.

Applications close 8 August, 1980.

Full information about conditions of employment and method of application obtainable from the Association of Commonwealth Universities (Appts), 36 Gordon Square, London WC1H 0PF.

The University College of Wales Aberystwyth

LECTURESHIP IN LAW

Applications are invited for the above post which is tenable from 1 October, 1980. Salary on the Scale for Lecturers £6,052 to £10,494 per annum (under review) according to age, qualifications and experience.

Application forms and further particulars of the post may be obtained from The Registrar (Staffing Office), The University College of Wales, Old College, King St., Aberystwyth, SY23 2AX. Closing date for applications 19 June, 1980.

UNIVERSITY OF DUBLIN Trinity College

Lectureship in Applied Linguistics/Phonetics

Applications are invited for the above post in the School of General Linguistics, Trinity College, Dublin. The successful candidate will be required to teach Linguistics and Phonetics to students training to become speech therapists.

Salary Scale: £6,659-£10,659 p.a. Appointment may be made at a point within the range £6,659-£7,040 or at a point appropriate to the qualifications and experience of the successful candidate. There is a non-contributory pension scheme. Application forms and further particulars relating to this post may be obtained from:

The Establishment Officer,
West Theatre,
Trinity College,
Dublin 2
Tel.: 772941, ext. 1778

The closing date for receipt of applications will be Friday, 13th June, 1980.

CARDIFF

UNIVERSITY COLLEGE

[illegible]

THE CITY UNIVERSITY

DEPARTMENT OF VISUAL SCIENCES

LECTURER

Applications are invited for the above post. The successful candidate will be expected to teach physics and sciences of vision, illuminants and photometry in undergraduate courses. Applicants should possess a degree in physics or a degree in some aspects of visual science.

Salary on the scale £6,659-£10,659 p.a. (Ref. 2/1/1/24) plus £740 London Weighting.

Superannuation and sickness benefits are available. Further information and application forms from the Deputy Academic Registrar, The City University, Northampton Square, London EC1V 0HB. Telephone 01-253 4399, Ext. 250. Quote reference 2/1/1/24. Closing date: 30 June, 1980.

Universities continued

LOUGHBOROUGH UNIVERSITY OF TECHNOLOGY

MANAGEMENT STUDIES

Applications are invited for the post of SSRC Research Fellow/Research Associate in the Department of Management Studies. The person appointed will undertake a research study under the SSRC Open Door Scheme on the financial evaluation of operating numerically controlled machines. Candidates should have relevant accounting and/or engineering qualifications and experience. The post is for two years on the scale £5,052-£8,768 (under review) with a minimum starting salary of £5,410.

Informal requests for application form and further details, quoting ref. 80/20 MS, to Paul Johnson, Establishment Officer. Informal telephone enquiries may be made to Professor John Sizer on (0509) 63171, ext. 325.

Loughborough Leicestershire

BELFAST
The Queen's University

TEMPORARY LECTURESHIP IN SOCIAL ANTHROPOLOGY

Department of Social Anthropology

This post, arising from leave of absence of a member of staff, will be available for one year from 1 October 1980. The successful candidate will be required to assist in teaching the introductory course in Social Anthropology, as well as other undergraduate courses in a subject such as applied anthropology, cognitive anthropology or the ethnography of an area.

Salary range £3,652-£5,727 per annum with superannuation under USU scheme.

Further particulars may be obtained from the Personnel Officer, The Queen's University of Belfast, BT7 1NN, Northern Ireland. Closing date: 14 June 1980.

University of Wales

UWIST

LECTURER LAW

Salary: £5,052 to £10,484

a high salary may be paid to an outstanding candidate.

Requests (quoting Ref. THES) for details and application form to Personnel Section (Academic), UWIST, Cardiff CF1 3NU. Closing Date: 13 June, 1980.

BRISTOL
THE UNIVERSITY
CHAIR OF SOCIOLOGY

The University proposes to make an appointment to the Chair of SOCIOLOGY which will become vacant on the retirement of Professor A. C. Kerckhoff.

Candidates should be distinguished scholars in any branch of sociology. Salary according to age and experience.

Further particulars may be obtained from the Registrar, Senate House, Tyndall Avenue, Bristol BS8 1TH.

CARDIFF
UNIVERSITY COLLEGE

Applications are invited for the post of Lecturer in the Department of Electrical and Electronic Engineering. The appointee will be required to teach in the Electronic Systems Area, with specialisation in Power Electronics.

Salary range £5,052 to £10,484 per annum.

Further particulars may be obtained from the Registrar, University College, Cardiff, to whom applications should be sent not later than June 13, 1980.

CAMBRIDGE
THE UNIVERSITY
DEPARTMENT OF ENGINEERING

UNIVERSITY LECTURESHIP IN INDUSTRIAL AUTOMATION AND MICROPROCESSOR APPLICATIONS

Applications for this post are invited from persons familiar with any aspect of the design, development or use of practical automation systems. Experience of hardware and interfacing problems in industrial systems would be particularly valuable.

The person appointed will be expected to teach, to carry out research, and to supervise postgraduate work in the general area of industrial automation, automation being interpreted in the broadest sense. He or she will be expected to work closely with the Electricity Council Fellow in Electromagnetic Metrology, Department and will also be asked to assist with teaching in such areas as electronic circuits, control systems and microprocessor applications.

Pensionable salary scale £7,275 to £11,171 per annum, depending on age and experience.

Further information and application forms may be obtained from the Secretary of the Appointments Committee, University Engineering Laboratory, Trumpington Street, Cambridge CB2 1PZ, to whom applications should be sent not later than June 30, 1980.

EAST ANGLIA
THE UNIVERSITY
NORWICH

Applications are invited for a LIBRARIAN LECTURESHIP IN GHANA

in the SCHOOL of ENGLISH and AMERICAN STUDIES

Candidates should possess a degree in drama or in literature or other relevant disciplines, together with further training or experience in theatre arts. This will be a twelve-month appointment commencing on September or October 1980. Salary within the range £3,052 to £6,397 under review plus family UBS benefits.

Applicants (one copy) which should consist of full curriculum vitae, including exact date of birth, together with the names and addresses of three referees to whom reference may be made should be lodged with the Establishment Officer, from whom further particulars may be obtained, quoting Ref. 2125, University of East Anglia, Norwich NR4 7TJ, not later than 6th June 1980. No forms of application are required in addition. Three referees you are requested to give only the names of those who can immediately be approached by the University.

EDINBURGH
THE UNIVERSITY
DEPARTMENT OF SOCIAL ANTHROPOLOGY

LECTURESHIP

Applications are invited for the above post, arising from the retirement of Professor Max Gluckman, tenable from 1 October 1980 or on such later date as may be agreed.

The successful candidate will be expected to teach in the general field of Social Anthropology, with special reference to Africa, and to undertake research.

Salary on the Lecturer scale £5,052 to £10,484 per annum, inclusive of London Weighting, with the option of two referees, should be sent to the Secretary to the University, University of Edinburgh, The Cowgate, Bristol Bridge, Edinburgh EH8 9YL, from whom further particulars may be obtained. Please quote reference 3026.

The closing date for applications is 16th June, 1980.

GLASGOW
THE UNIVERSITY
ASSISTANT CLERK OF SENATE

Applications are invited for the above post, which will fall vacant by retirement on 1st October 1981. This is a Grade III post in terms of the salary scales for Universities (£4,010-£12,484).

Further particulars may be obtained from the Secretary of the University Court (Room 201, University of Glasgow, Glasgow G12 8QQ, with whom applications in duplicate should be lodged, with the names and addresses of three referees, not later than June 30, 1980.

GLASGOW
THE UNIVERSITY
LECTURER IN ECONOMIC HISTORY

Applications are invited for a LECTURESHIP in the Department of ECONOMIC HISTORY. The successful candidate will be expected to teach part in economic history of the United States, part in modern business or urban history and to an interest in the period. The post is tenable from 1st October 1980 or as soon as possible thereafter within the range £5,052 to £10,484 per annum.

Further particulars may be obtained from the Secretary of the University of Glasgow, Glasgow G12 8QQ, to whom applications (twelve copies) should be lodged not later than June 30, 1980. Please quote Ref. No. 4681E.

HERIOT-WATT
THE UNIVERSITY
DEPARTMENT OF ELECTRICAL AND ELECTRONIC ENGINEERING

LECTURER

Applications for the above post are invited from honours graduates in electrical or electronic engineering. Preference will be given to applicants with postgraduate research experience in the area of satellite communications or signal processing.

The appointment will be on the salary scale for Lecturers, Grade I, £5,052 to £10,484 per annum.

Further particulars may be obtained from the Registrar, Heriot-Watt University, Riccarton, Edinburgh EH14 4AS, to whom applications should be sent not later than June 30, 1980.

KENT
THE UNIVERSITY
CANTERBURY

FACULTY OF SOCIAL SCIENCES

LECTURER IN QUANTITATIVE SOCIAL SCIENCE AND MANAGEMENT SCIENCE

Applications are invited for a vacant post of Lecturer in Quantitative Social Science and Management Science with effect from 1st October 1980. Applications are particularly invited from candidates with an interest in Economics and/or Management Science.

Salary according to qualifications and experience will be within the range £6,052 to £10,484 per annum. It is likely that the appointment will be made within the lower half of this scale.

Application forms (three copies) and further particulars at this level will be sent upon receipt of a S.A.E. (10x4in.), by Mr. J. D. Haily, Senior Assistant Registrar, The University of Kent, Canterbury, Kent, to whom completed application forms should be returned not later than Monday 16th June, 1980. Please quote reference No. A18/80.

LEEDS
THE UNIVERSITY
DEPARTMENT OF CHEMICAL PATHOLOGY

Applications are invited for the post of RESEARCH FELLOW in the above Department. The appointment will be made for a fixed period of two years.

There will be opportunity to train in all aspects of diagnostic chemical pathology and the successful candidate will be given responsibility for some aspect of that work. In addition, he/she would be encouraged to develop their own research and development activities of the Department. A suitable candidate may be permitted to apply for registration for the Department's two-year part-time course leading to an M.Sc. in Clinical Biochemistry.

Salary £4,677 to £8,505 per annum inclusive of London Weighting, on the Scale for Biochemists.

Interested persons who would like to discuss the post in more detail, or visit the Department, should contact Professor D. B. Morgan, Leeds (10532) 32799, ext. 416.

Application forms and further particulars may be obtained from the Registrar, The University, Leeds LS2 9JT, quoting reference number 6/4157/Ch. Closing date for applications: 13th June 1980.

LONDON
GOLDSMITHS' COLLEGE
(University of London)

ACADEMIC REGISTRAR

Applications are invited for the post of Academic Registrar which is available from September 1, 1980 on the retirement of the present holder.

The Academic Registrar is one of the senior officers of the college, responsible under the Registrar, for academic administration and is responsible to the Academic Board.

Salary on Lecturer Scale, £6,052 to £10,484 "London" Weighting inclusive of London Weighting while future pay will be increased as a result of the Community College Award, and is subject to further review from April 1, 1980.

Write for further details to the Senior Assistant Registrar (Personnel), University of London, Goldsmiths' College, New Cross, London SE14 6NW.

Closing date for applications: June 6, 1980.

LONDON
THE LONDON SCHOOL OF ECONOMICS
(University of London)

LECTURESHIP IN SOCIAL PSYCHOLOGY

Applications are invited for appointment from October 1, 1980, for a Lectureship in Social Psychology. Research experience in one or more of the following fields would be an advantage: child development, socialisation in communication, cognitive social psychology.

The appointment will be on the salary scale for Lecturers of £5,052 to £10,484 a year plus £740 London Weighting Allowance, in addition the starting salary commensurate will be given to qualifications, age and experience.

Applications should be received not later than Monday 16th June, 1980. Please quote reference No. 4182.

LEEDS
THE UNIVERSITY
DEPARTMENT OF ENGLISH AND AMERICAN STUDIES

Candidates should possess a degree in drama or in literature or other relevant disciplines, together with further training or experience in theatre arts. This will be a twelve-month appointment commencing on September or October 1980. Salary within the range £3,052 to £6,397 under review plus family UBS benefits.

Applications (one copy) which should consist of full curriculum vitae, including exact date of birth, together with the names and addresses of three referees to whom reference may be made should be lodged with the Establishment Officer, from whom further particulars may be obtained, quoting reference 2126, University of East Anglia, Norwich NR4 7TJ, not later than 6th June 1980. No forms of application are required in addition. Three referees you are requested to give only the names of those who can immediately be approached by the University.

EDINBURGH
THE UNIVERSITY
DEPARTMENT OF SOCIAL ANTHROPOLOGY

LECTURESHIP

Applications are invited for the above post, arising from the retirement of the present holder.

The Academic Registrar is one of the senior officers of the college, responsible, under the Registrar, for academic administration and is responsible to the Academic Board.

Salary on Lecturer Scale, £6,052 to £10,484 "London" Weighting inclusive of London Weighting while future pay will be increased as a result of the Community College Award, and is subject to further review from April 1, 1980.

Write for further details to the Senior Assistant Registrar (Personnel), University of London, Goldsmiths' College, New Cross, London SE14 6NW.

Closing date for applications: June 6, 1980.

LONDON
THE UNIVERSITY
CHAIR OF SOCIOLOGY

The University proposes to make an appointment to the Chair of SOCIOLOGY which will become vacant on the retirement of Professor A. C. Kerckhoff.

Candidates should be distinguished scholars in any branch of sociology. Salary according to age and experience.

Further particulars may be obtained from the Registrar, Senate House, Tyndall Avenue, Bristol BS8 1TH.

NEW ZEALAND
THE UNIVERSITY OF AUCKLAND
SCHOOL OF MEDICINE

THE MAURICE WILKINS LABORATORY RESEARCH FELLOWSHIP

Electronic Laboratories have initiated a new research and development programme in medical electronics and biomedical engineering. Applications are invited from persons interested in marine biology.

Candidates should have a degree in ceramic chemistry and awards for research in medicine, communications or electronics. Experience in the chemistry of ceramic products. Experience in the chemistry of marine organisms or marine organic products would be an advantage.

The fellowship is tenable for one year in the first instance and is renewable for a further year. The appointee will be expected to undertake research in the area of clinical aspects of marine biology.

Conditions of appointment and salary for fellowships are available from the Registrar, The University of Auckland, Private Bag, Auckland, New Zealand. Applications should be addressed to the Registrar, Auckland, and should be received not later than 31 July 1980.

OXFORD
QUEEN'S COLLEGE
COLLEGE CHAPLAIN

The College is seeking an Anglican priest as Chaplain from 1st October, 1980. The appointment will be for five years.

Further particulars may be obtained from the Dean's Secretary, Christ Church, Oxford OX1 1DP.

READING
THE UNIVERSITY
DEPARTMENT OF LAW

Applications are invited for a LECTURESHIP in LAW for a fixed period of five years from 1st October, 1980. There is no restriction on the field of interest of candidates.

Further particulars may be obtained from the Registrar (Room G1), Whiteknights House, The University, Whiteknights, Reading RG6 2AH, to whom applications should be received not later than 21st June, 1980.

STRATHCLYDE
THE UNIVERSITY

Applications are invited for a SENIOR LECTURESHIP in LEGAL PHILOSOPHY/LEGAL THEORY in the DEPARTMENT of NATURAL PHILOSOPHY from physicists or electronic, electron or laser engineers.

It is expected that the successful candidate will have research interests and enthusiasm in the fields of plasma physics.

Salary scale commencing £10,484 per annum with placing on scale according to qualifications, experience and superannuation benefit.

Application forms and further particulars (quoting 13/80) are enclosing a self-addressed envelope (9" x 4") may be obtained from the Academic Appointments Officer, University of Strathclyde, Royal College Building, 204 George Street, Glasgow G1 1XW with whom applications should be lodged by 31 May, 1980.

WALES
THE UNIVERSITY
LAMPETER

SAINT DAVID'S UNIVERSITY COLLEGE

TEMPORARY LECTURER IN CLASSICS

Applications are invited for the post of TEMPORARY LECTURER in the DEPARTMENT of CLASSICS for one year from October 1, 1980 to September 30, 1981 (in the odd of Ancient History, though some knowledge of Classics may be required).

The appointment will be made at the first six points of the scale, £4,052 to £5,052 per annum.

Further particulars and application forms from the Registrar, St. David's University College, Lampeter, Dyfed SA48 7ED. Closing date: June 5, 1980.

WALES
THE UNIVERSITY
LAMPETER

SAINT DAVID'S UNIVERSITY COLLEGE

LECTURESHIP IN THE HISTORY OF THE USA

Applications are invited for the post of LECTURER in the HISTORY of the United States of America from October 1, 1980. Salary on scale for Lecturers, Grade I, £5,052 to £10,484 per annum. The initial appointment is for three years, the first six points of the scale. USA membership.

Further particulars and application forms (stamped addressed envelope) from the Registrar, St. David's University College, Lampeter, Dyfed SA48 7ED. Closing date: June 5, 1980.

WARWICK
THE UNIVERSITY
TEMPORARY LECTURESHIP IN POLITICS

Available for a period of one year from October 1980. The successful candidate will be expected to teach on a stimulating course on the study of economic policy and also to make a contribution towards undergraduate teaching in the area of research design and political behaviour. Salary scale £5,052 to £10,484 on the Lecturer scale + £6,000 London Weighting supplement.

Further particulars and application forms from the Academic Registrar, University of Warwick, Coventry CV4 7AL, quoting reference 401/80. Closing date for receipt of applications: June 13, 1980.

YORK
THE UNIVERSITY
DEPARTMENT OF ENGLISH AND RELATED LITERATURE

TWO TEMPORARY LECTURESHIPS

Applications are invited for the above posts, recent (not yet holders of a PhD) or about to obtain, candidates specifically qualified in English literature (not excluding Medieval Literature).

The appointments will be made at or below the third point of the current Lecturer Scale, i.e. £5,052 to £5,740.

Six copies of qualifications and curriculum vitae (one from each referee) should be lodged by June 7, 1980 with the Registrar, The University of York, Heslington, York YO1 5DD, from whom further particulars may be obtained. Please quote reference 3/4/80.

BRADFORD
THE UNIVERSITY
PERSONNEL SECRETARY

Applications are invited for a new post, the duties and consequences of the reorganisation following the retirement of the Personnel Secretary, with the salary will be on Lecturer Grade II (the Professorial Grade II). The Professor with his experience and qualifications is expected to apply.

Further particulars may be obtained from the Registrar, University of Bradford, Bradford, West Yorkshire BD7 1DP. Applications should be submitted as soon as possible. Please quote reference (H/S).

Fellowships and Studentships

ASTON IN BIRMINGHAM
THE UNIVERSITY

JAMES WATT TRAVELLING FELLOWSHIP 1980

The James Watt Memorial Foundation is offering a TRAVELLING FELLOWSHIP of the value of £3,000 to assist holders of a higher degree in the University of Aston in Birmingham awarded between 1st January, 1977 and 31st December, 1979, to broaden their experience by studying abroad, some applied aspect at their discretion. Applications may exceptionally be considered for visits to be undertaken in the United Kingdom. Preference will be given to projects generally concerned with engineering or technology.

Full particulars and application forms (returnable by 2nd June, 1980) may be obtained from The Registrar, The University of Aston in Birmingham, Gosta Green, Birmingham B4 7ET.

EDINBURGH
THE UNIVERSITY

SRC CASE STUDENTSHIP

Time-dependent turbulent shear flow (in collaboration with NORWICH).

Applications are invited for the above RESEARCH STUDENTSHIP, which involves the application of early successes in the theory of time-dependent flows. A particular aim has been to develop a mean flow, with application to flow processes in internal combustion engines.

The work will be purely theoretical but there will also be some collaboration with a group of mathematicians working in the same field. Applicants should possess, or expect to obtain, a good honours degree in physics, mathematics or engineering.

Further details may be obtained from Dr W. G. McCombie, Department of Mechanical Engineering, University of Edinburgh, King's Buildings, Mayfield Road, Edinburgh EH9 3JL, to whom applications should be submitted as soon as possible.

ESSEX
THE UNIVERSITY

SSRC LINKED STUDENTSHIP IN SOCIAL/ECONOMIC HISTORY, 1980

Applications are invited for an SSRC studentship tenable full time only linked to a research project on Industrial Decentralisation Policy in Italy, Belgium and the Netherlands, 1950-1980. The project is concerned with both processes of implementation in towns and countryside, and the competition, internal structures and strategic mediating mechanisms of the various agents involved in the different Italian states. The successful candidate will be expected to choose within a broad range of topics, one for a study of aspects of poverty in urban and rural industrial decentralisation and its relationships in different forms of agricultural tenancies, the relationships and boundaries between the state, the unemployed and other groups, of poverty, social mechanisms regulating poverty among the residential poor, the relationships between poor, the assisted and the donors; the poor and the working class in the late 19th century.

Students without a knowledge of Italian should be deterred from applying, provided they are willing to learn the language.

Applications, including a curriculum vitae and two referees and addresses of five referees, should be sent to: Dr. Wohl, Department of History, University of Essex, Wivenhoe Park, Colchester, CO4 3SQ, not later than 1 June, 1980.

EXETER
THE UNIVERSITY
DEPARTMENT OF CHEMISTRY

Applications are invited for an SRC POSTDOCTORAL RESEARCH FELLOWSHIP, tenable 1 October, 1980, for work in collaboration with Dr. Carruthers on the synthesis of bifunctional cyclic peptides and compounds of potential physiological interest.

The appointment will be for one year in the first instance, with possible extension to a second year. The salary will range £6,052 to £8,740 per annum, plus superannuation.

Applications with curriculum vitae and the names and addresses of two referees should be sent to Dr. W. Carruthers, Chemistry Department, University of Exeter, Exeter, EX4 4QD, as soon as possible.

THE OPEN UNIVERSITY
SCIENCE RESEARCH COUNCIL RESEARCH STUDENTSHIP IN MATHEMATICS, 1980
BRANCH A

An S.R.C. Research Studentship is available for the Academic Year 1980-81 (starting 1 October 1980) for a student to work for a Ph.D. degree in pure mathematics. Candidates will be expected to have obtained, or be reading for, a first class honours degree in mathematics, preferably in the area of the research, and should be under 28 years of age on 1st October 1980. Preference will be given to candidates with an interest in marine biology.

Candidates should have a degree in ceramic chemistry and awards for research in medicine, communications or electronics. Experience in the chemistry of ceramic products. Experience in the chemistry of marine organisms or marine organic products would be an advantage.

The fellowship is tenable for one year in the first instance and is renewable for a further year. The appointee will be expected to undertake research in the area of clinical aspects of marine biology.

Conditions of appointment and salary for fellowships are available from the Registrar, The University of Auckland, Private Bag, Auckland, New Zealand. Applications should be addressed to the Registrar, Auckland, and should be received not later than 31 July 1980.

BRADFORD
UNIVERSITY

SRC STUDENTSHIP IN ARCHAEOLOGICAL SCIENCE

Applications are invited for an SRC studentship in archaeological science, to be awarded for one year (or longer if an appropriate project is agreed) to commence on 1st October 1980 or such later date as may be agreed.

Applicants should have or expect to obtain a first class honours degree in archaeology or in the science of archaeology.

Further particulars and application forms may be obtained from the Registrar, University of Bradford, Bradford, West Yorkshire BD7 1DP. Applications should be submitted as soon as possible. Please quote reference (H/S/A).

BRADFORD
UNIVERSITY OF

POSTGRADUATE STUDENTSHIP IN APPLIED SOCIAL STUDIES
SOCIAL RESEARCH STUDENTSHIP

Applications are invited from good honours degree graduates in the social sciences, social policy or social work for a two-year studentship commencing October 1980 leading to the M.Phil. or Ph.D. degree, which will include a research project, lasting one year, and a research training course, and special seminars, social work practice and theory. Applicants will be considered for a research studentship in the field of social welfare, social work, social policy, social administration, or related fields. Applicants will be considered for a research studentship if they are pursuing research in any other area of society.

Applications including a full curriculum vitae and a statement about the proposed area of research should be sent to the Postgraduate Secretary, Department of Social Studies, University of Bradford, Bradford, West Yorkshire BD7 1DP, from whom further details may be obtained, by the end of the month of the appointment, quoting Ref. 4/SS/A.

BRADFORD
UNIVERSITY OF

ARCHAEOLOGICAL SCIENCE

Applications are invited for a studentship in archaeological science, to be awarded for one year (or longer if an appropriate project is agreed) to commence on 1st October 1980 or such later date as may be agreed.

Applicants should have or expect to obtain a first class honours degree in archaeology or in the science of archaeology.

Further particulars and application forms may be obtained from the Registrar, University of Bradford, Bradford, West Yorkshire BD7 1DP. Applications should be submitted as soon as possible. Please quote reference (H/S/A).

READING
THE UNIVERSITY
DEPARTMENT OF LINGUISTICS

SRC STUDENTSHIP IN LINGUISTICS AND ACOUSTICS

Applications are invited for a studentship in linguistics and acoustics, to be awarded for one year, to commence on 1st October 1980 or such later date as may be agreed.

Applicants should have or expect to obtain a first class honours degree in linguistics, phonetics or acoustics.

Further particulars and application forms may be obtained from the Registrar, University of Reading, Reading RG6 2AH. Applications should be submitted as soon as possible. Please quote reference (H/S/L).

Polytechnics

LEICESTER
THE POLYTECHNIC
SCHOOL OF ENGINEERING
COMPUTER STUDIES

Applications are invited for a post of Lecturer II/Senior Lecturer in Computer Studies, to teach mainly on the Higher National Diploma course. Applicants should have a good honours degree in computer studies or a related discipline, and preferably some teaching experience. Salary scale: Lecturer II £4,806-£7,086; Senior Lecturer £7,082-£8,250 (bel)-£8,871 per annum.

Further particulars and application forms may be obtained from the Personnel Officer, The Polytechnic, Leicester LE1 9BH. Tel. 0533 551551 ext. 2301.

Closing date for receipt of applications: 3 weeks after the appearance of this advertisement.

LIVERPOOL POLYTECHNIC

RESEARCH ASSISTANTS

£3,408-£3,990 p.a.

Posts will be available in October 1980 for the posts listed below:

Department of Electrical and Control Engineering
1. ELEMENT MATERIALS FOR N.R.D. FUSES
Dr. R. Wilkins

Department of Chemistry and Biochemistry
2. STUDY OF THE BIOCHEMICAL MECHANISMS INVOLVED IN HUMAN BILE FORMATION
Dr. J. Billington

3. STUDY OF PHASE TRANSFER CATALYSTS AS PROMOTORS OF NUCLEOPHILIC SUBSTITUTION REACTIONS
Dr. C. A. Neville

4. SOME SYNTHETIC AND ANALYTICAL INVESTIGATIONS RELATED TO VEGETABLE OILS AND ANIMAL FAT
Dr. A. Beal

Department of Pharmacy
5. INFLAMMATORY DISEASE OF THE COLON
Dr. K. C. Elliott

Department of Mechanical Marine and Production Engineering
6. PLASTIC MODEL OF CENTRELESS GRINDING PROCESS
Dr. B. Rowe

7. REACTIONS AND MEASUREMENT OF VALVE/ORIFICE DISCHARGE COEFFICIENT VARIATION UNDER UNSTEADY FLOW
Dr. W. Weston

Department of Biology
8. ION TRANSPORT OF VANADIUM IN HIGHER PLANTS
Dr. K. W. Tripp

Department of Surveying
9. SOIL MOVEMENT IN BUILDING DESIGN
Dr. J. J. Wilson

Department of Building and Civil Engineering/Physics
10. WAVE STRESSES ASSOCIATED WITH A SLOPING SEA WALL
Dr. J. C. Bailey

Department of Graphic Design
11. TECHNIQUES IN SCIENTIFIC ORNITHOLOGICAL ILLUSTRATION
Dr. J. Roberts

Department of Social Studies
12. ECONOMY, SOCIETY AND CLASS RELATIONS IN 19th MERSEYSIDE
Dr. K. Hudnagel

PLEASE QUOTE REFERENCE LP/427 and relevant subject

Closing date is 21 days from the appearance of this advertisement.

Application forms and further particulars from the Personnel Officer, Liverpool Polytechnic, 2 Rodney Street, Liverpool L1 2UA. Tel: 051-709 6141 Ext. 45.

Enquiries may be made to the supervisors named.

SHEFFIELD CITY POLYTECHNIC
DEPARTMENT OF ACCOUNTANCY AND COMPANY ADMINISTRATION

Lecturer II/Senior Lecturer in Financial Accounting (Two posts)

Salary Scale:
Senior Lecturer £7,082-£8,250 (bel)-£8,871.
Lecturer II £4,806-£7,086.

The persons appointed will be expected to teach on a range of professional diploma and degree courses. Specialist ability in data processing is required for one post and in Auditing for the other.

Principal Lecturer in Management Accounting

Salary Scale:
Senior Lecturer £8,266-£8,182 (bel)-£10,568

Applicants should have experience and a capacity for academic leadership in a specialist research area. Research experience would be an advantage. Applications are invited from suitably qualified persons for the post of Reader in the School of Marine Studies.

The person appointed will be expected to build up and maintain an on-going research capability including the attraction of funds from Research Councils and Industry. The preferred subject area is structural design and the will, not be critical provided the candidate has direct experience of research and research supervision within the general field of marine technology.

Polytechnics continued

Faculty of Technology

DIRECTOR OF STUDIES AND HEAD OF SCHOOL OF MECHANICAL AND INDUSTRIAL ENGINEERING

Salary Scale: £11,304-£13,479 (under review)

Applications are invited for the post of Director of Studies and Head of the School of Mechanical and Industrial Engineering. The School offers a CNAA sandwich degree with honours and a part-time degree in engineering. In addition strong emphasis is placed on technician education, and courses are run leading to the TEC Higher Certificates and Diplomas, as well as the Higher National Diplomas. There are also Polytechnic Diplomas at professional level.

There is a strong research tradition and the School is deeply involved with two Teaching Companies.

Applicants should be well-qualified and experienced graduates able to make a significant contribution to the work of the School, including curriculum development and research. The successful applicant will be required to maintain and foster close links with industry and to support professional activities.

The Polytechnic is creating a limited number of Professorships in which academic leadership will be emphasized, and the successful applicant for this post will be eligible to apply.

The Polytechnic is a direct grant institution with an Independent Board of Governors. It opened in 1971 and has a student population of some 7,500. It has extensive new purpose-built accommodation, including 830 residential places on the 114-acre campus overlooking the sea at Jordanstown, a pleasant and quite residential area. There is a scheme of assistance with removal.

Further particulars and application forms, which must be returned by June 2, may be obtained by telephoning Whitesabbey (0231) 65131, ext. 2243, or by writing to:

The Establishment Officer,
Ulster Polytechnic, Shore Road,
Newtownabbey, Co. Antrim, BT37 0QB.

Ulster Polytechnic

Faculty of Technology

READER IN MARINE TECHNOLOGY

Applications are invited from suitably qualified persons for the post of Reader in the School of Marine Studies.

The person appointed will be expected to build up and maintain an on-going research capability including the attraction of funds from Research Councils and Industry. The preferred subject area is structural design and the will, not be critical provided the candidate has direct experience of research and research supervision within the general field of marine technology.

LECTURER II/SENIOR LECTURER INDUSTRIAL ENGINEERING

Applications are invited for the post of Lecturer II/Senior Lecturer within the School of Mechanical and Industrial Engineering. The post is in the general area of Manufacturing Technology and will include teaching on a broad range of courses from Higher Certificate to Degree Level. The successful applicant will have a good Honours Degree and/or a Professional Qualification.

LECTURER II MECHANICAL ENGINEERING

(Two Year Appointment)

Applications are invited for this temporary post in the School of Mechanical and Industrial Engineering. Applicants should have a good Honours Degree and/or a Professional Qualification.

LECTURER II MICROELECTRONICS

Applications are invited for a new post in the School of Electrical and Electronic Engineering. The duties will include teaching, laboratory development and planning in connection with new higher diploma and degree courses in microelectronics. Applicants should hold a good Honours degree and relevant teaching or industrial/research experience in the area of digital systems and microprocessor applications engineering.

TEMPORARY LECTURER II MICROELECTRONICS AND ELECTRONIC CIRCUIT DESIGN

Two one-year full-time appointments in the School of Electrical and Electronic Engineering carry duties which include teaching and laboratory development associated with new higher diploma and degree courses in microelectronics. Applicants should preferably possess a good Honours degree and have teaching or industrial research experience in either of the areas:

(i) digital systems and microprocessor applications engineering, or

(ii) electronic circuit design and signal analysis.

Salary Scale: Principal Lecturer or Reader, £9,138-£11,568; Senior Lecturer; £7,785-£9,622; Lecturer II, £5,220-£6,436; all under review.

The Polytechnic is a direct grant institution with an Independent Board of Governors. It opened in 1971 and has a student population of some 7,500. It has extensive new purpose-built accommodation, including 830 residential places on the 114-acre campus overlooking the sea at Jordanstown, a pleasant and quite residential area. There is a scheme of assistance with removal.

Further particulars and application forms, which must be returned by June 2, may be obtained by telephoning Whitesabbey (0231) 65131, ext. 2243, or by writing to:
The Establishment Officer, Ulster Polytechnic, Shore Road, Newtownabbey, Co Antrim BT37 0QB.

ULSTER POLYTECHNIC

Faculty of Arts

LECTURER II OR SENIOR LECTURER IN PAINTING

(Temporary one year full-time post)

Applicants should have a good honours degree (or equivalent in Fine Art/Painting) preferably supported by postgraduate qualifications. They should be committed artists able to communicate and exchange ideas and knowledge with students and staff. Teaching experience at BA (hons) level would be an advantage.

Faculty of Science

LECTURING POSTS IN COMPUTER SCIENCE

Teaching and research in the School of Computer Science covers four main areas—data processing, computer systems, applied statistics and computer education. All applicants for the posts listed below should have a good Honours Degree and/or an appropriate professional qualification. Teaching experience or professional/industrial experience with an interest in teaching would be considered an advantage. Research and consultancy will be encouraged.

PRINCIPAL LECTURER OR SENIOR LECTURER

(Two posts)

Successful candidates will be expected to be an academic leader in his or her own subject area. The person appointed to one of these posts will be responsible for organising the industrial placement of students.

LECTURER II/SENIOR LECTURER

(Data Processing)

Candidates should be able to contribute in the teaching of a wide range of data processing topics and to specialise in some of those areas.

LECTURER II/SENIOR LECTURER

(Computer Systems)

Candidates should have a qualification or relevant practical experience in electronic engineering and interested in the hardware/software interface of computer systems and their applications in data processing.

Leicester Polytechnic

HEAD OF SCHOOL OF ECONOMICS AND ACCOUNTING

(Post No. 162)

Applications are invited from candidates with substantial experience in teaching, research and/or consultancy in Business Studies, Economics or Accounting Studies.

A successful candidate who meets the appropriate criteria may be granted the title of Professor in the Polytechnic.

Salary scale, Burnham Head of Department Grade VI (currently under review – details expected to be available shortly).

Further particulars and application form available from the Staffing Officer, Leicester Polytechnic, P.O. Box 143, Leicester LE1 9BH. Tel. (0533) 551551 Ext. 2301.

Closing date for receipt of applications: 3 weeks after the appearance of this advertisement.

BRISTOL POLYTECHNIC

DEPARTMENT OF COMPUTER STUDIES AND MATHEMATICS

Applications are invited for three posts in the Department of Computer Studies and Mathematics, in order to teach:

LECTURER II/SENIOR LECTURER IN COMPUTER SCIENCE—Ref No. L41/44

We are particularly looking for a member of staff with an active interest in, and recent experience of the detailed implementation of particular software and systems in modern business, to supervise in more general systems experience, which we already have in the Department.

LECTURER II/SENIOR LECTURER IN OPERATIONS RESEARCH—Ref No. L41/49

This is an increasingly important area in business studies and management courses which is taught from the Computer Studies and Mathematics Department. We are seeking a member of staff with recent industrial/commercial experience (not ideally) some experience of teaching.

LECTURER II/SENIOR LECTURER IN MATHEMATICS—Ref No. L41/98

The post has arisen because of the increased student demand in technological areas (particularly in engineering and construction). We are seeking recent experience in applying mathematics in technology. Recent experience in micro-processor applications within this area would be an advantage.

SALARY SCALE: LECTURER II, £4,806-£7,086 (bel)-£8,250 (hon)-£8,871 per annum.

Duties to commence on 1 September, 1980, or as soon as possible thereafter.

For further details and an application form to be returned by 6 June, 1980, please contact Personnel Office, Bristol Polytechnic, Coldharbour Lane, Frenchay, Bristol BS16 1QY. Please quote appropriate Reference Numbers on all correspondence.

SHEFFIELD CITY POLYTECHNIC
DEPARTMENT OF HOTEL AND CATERING STUDIES AND HOME ECONOMICS

Lecturer II/Senior Lecturer in Food Studies

Applicants should have a degree or professional qualification in food science or technology and experience of work and/or research in the food processing or catering industry.

Lecturer II/Senior Lecturer in Accommodation and Food Management

Applicants should have a degree in Hotel and Catering Management or a similar technologically based subject and three years experience in management in the institutional or hotel field.

Salary Scale: Senior Lecturer: £7,082-£8,250 (bel)-£8,871; Lecturer II: £4,806-£7,086.

Further details and application forms are available from the Personnel Officer (Dept THES/171), Sheffield City Polytechnic, Nafferton House, Pitsmoor Road, Sheffield S3 7BB, or by telephoning 0742 20911, ext 787. Completed forms should be returned by 6 June, 1980.

PAISLEY COLLEGE
DEPARTMENT OF SOCIAL STUDIES

POST-GRADUATE RESEARCH STUDENTSHIPS

in the following fields:
SOCIOLOGY
SOCIAL ADMINISTRATION
PSYCHOLOGY
POLITICS

Proposals are invited from holders of First Class Honours Degrees in the appropriate disciplines for research projects leading to M.Phil. or Ph.D. for consideration for two sets of studentship of equal value:

(a) SSRC Post Awards (see SSRC Students Handbook and supplement)

(b) SED-funded College Studentships

Enquiries to Professor H. N. Sheldon, Department of Social Studies, Paisley College, High Street, Paisley PA1 2BE. Tel.: 041-887 1241, Ext. 242.

HERTFORDSHIRE
THE HATFIELD POLYTECHNIC

PRINCIPAL LECTURER IN INDUSTRIAL ENGINEERING

Candidates should be qualified in Industrial Engineering, MANAGEMENT SCIENCE, preferably in a range of courses, particularly in Engineering Production, Production Engineering, Industrial Engineering. They should have a degree or equivalent qualification and substantial industrial experience. Ability to contribute to research and recent research or consultancy activities are highly desirable.

Salary £9,336-£10,362 (under review) plus £177 total weighting.

Application forms and further details can be obtained from the Staffing Officer, The Hatfield Polytechnic, Wellfield, Hatfield, Herts. AL10 9AB (quoting Ref. HI/THES) or telephone 0707 62851, extension 3655 (24 hours).

Closing date: 2 June, 1980.

LONDON
THE POLYTECHNIC OF CENTRAL LONDON
SCHOOL OF ENGINEERING
DEPARTMENT OF MECHANICAL ENGINEERING

LECTURER II IN HYDRAULIC ENGINEERING

Salary £4,806 to £6,998 including London Allowance.

Duties will be largely part time teaching on courses for Technical Teachers, Technicians and Technicians and Technical Teachers, and Technical Teachers and Technicians, and Technical Teachers and Technicians, and Technical Teachers and Technicians

Polytechnics continued

THE POLYTECHNIC OF WALES

POLYTECHNIC CYMRU

DEPARTMENT OF ELECTRICAL AND ELECTRONIC ENGINEERING

From 1st September, 1980, or as soon as possible thereafter:

PRINCIPAL LECTURER

to teach Electronics to Degree and Diploma students

Applicants must possess a good Honours Degree, relevant industrial experience and an active research interest. Experience of teaching Digital Electronics would be an advantage.

Salary: £9,130-£11,886 per annum inclusive (subject to confirmation

Further particulars and application forms may be obtained from The Assistant Director (Staffing), The Polytechnic of Wales, PONTYPRIDD, Mid Glamorgan CF37 1DL. Telephone: (0443) 405133, ext. 3231.

Completed forms to be returned not more than 21 days from the appearance of this advertisement.

The Polytechnic of Wales

LONDON

THE POLYTECHNIC OF NORTH LONDON

STUDENT SERVICES UNIT

A FULL-TIME STUDENT COUNSELLOR is required to work within a team of student services personnel to provide personal and confidential counselling for students and staff.

The person appointed should preferably have experience in Higher Education and with overseas students, and should either be an accredited practitioner of the Student Counselling Division of the British Association for Counselling or eligible to apply for MBAC.

Salary Scale £4,767.64 to £6,702.93 inclusive of London Allowance.

Application form obtainable from: Establishment Officer, The Polytechnic of North London, Holloway Road, London N7 8DB.

OXFORD

THE POLYTECHNIC

DEPARTMENT OF HUMANITIES

LECTURER IN SPANISH

LECTURER IN PRINCIPAL LECTURER IN HISTORY OF ART

Applications are invited for this post from candidates who have a good honours Degree in the discipline or art history and research interests in the 17th or 18th Centuries. Teaching is to lions B.A. Degree level, and candidates will be expected to have had teaching experience at this level in addition to teaching in his/her area of special interest. The successful candidate will be entitled to teach a wide range of European art.

Salaries: Principal Lecturer £11,304-£11,886; Senior Lecturer £7,899-£9,675; Lecturer II £4,800-£7,866 (under review, transfer from Lecturer II to Senior Lecturer is subject to sufficiency requirements, automatic).

Applications, including a curriculum vitae and the names of three referees, should be sent to the Secretary, Department of Humanities, Oxford Polytechnic, Oxford OX3 0BP, from whom further particulars and application forms may be obtained.

Colleges and Institutes of Technology

ROBERT GORDON'S INSTITUTE OF TECHNOLOGY

ABERDEEN

SCHOOL OF CHEMISTRY

PAPER TECHNOLOGY SECTION

LECTURER

In Paper and/or Paper Board Making with graduate qualifications in Chemical Engineering, Science or Paper Science and practical experience for SCOTEC Higher Certificate Course in Paper Technology and RGIT Postgraduate Diploma Course in Paper Technology. Consultancy and research encouraged.

Salary in range £4,754-£9,020 per annum (under review).

Assistance with removal expenses.

Further details from the Secretary, Robert Gordon's Institute of Technology, Schoolhill, Aberdeen AB9 1FR (0224 574511).

DUNDEE COLLEGE OF TECHNOLOGY

Department of Electrical & Electronic Engineering

SENIOR LECTURESHIP (A) IN DIGITAL SYSTEMS

LECTURESHIP (A) IN DIGITAL SYSTEMS

Applicants should possess a good honours degree in Electrical and/or Electronic Engineering and preferably a higher degree, together with appropriate industrial and/or research experience in digital systems and/or computing. The persons appointed will be expected to teach up to honours degree level and to undertake research in an appropriate area. In addition, the successful candidate for the Senior Lectureship will be required to provide leadership in the subject area and assist in the administration and development of the department.

Salary scales (currently under review): Senior Lectureship—£11,445-£11,730 (plus £1,010,591). Lectureship—£4,754-£8,395 (bar) £9,020.

(Initial placing on these scales will depend on approved previous experience. Financial assistance towards the cost of removal expenses may be payable.

Application forms and further particulars obtainable from the Personnel Officer, Dundee College of Technology, Bell Street, Dundee, DD1 1HG, to whom completed application forms should be returned by 19 May, 1980.

DUNDEE COLLEGE OF TECHNOLOGY

Department of Mathematics & Computer Studies

LECTURESHIP IN APPLIED STATISTICS OR OPERATIONAL RESEARCH

This post will involve teaching at degree and diploma level. The successful applicant will be well qualified in statistics, mathematics and/or operational research and have a specific interest in the applications of statistics and/or operational research in business and/or commerce.

Salary (under review): Lecturer II (A): £4,754-£4,395 (bar)—£9,020 with initial placing according upon approved previous experience.

Further particulars and application forms may be obtained from the Personnel Officer, Dundee College of Technology, Bell Street, Dundee, DD1 1HG, with whom applications should be lodged not later than Friday, 6 June, 1980.

DUNDEE COLLEGE OF TECHNOLOGY

Department of Business Studies

LECTURESHIP IN BUSINESS STUDIES

The person appointed will be required to teach one or two of the following up to Honours Degree level: Business Administration, Business Policy, Office Management. Applicants must be qualified in a relevant management or social science discipline. They should also have practical/teaching experience and course development/research experience.

Salary (under review): On the scale £4,754-£6,398 (bar)-£8,020, with initial placing dependent upon approved prior experience. Financial assistance towards the cost of removal expenses may be payable.

Further qualifications and application forms obtainable from the Personnel Officer, Dundee College of Technology, Bell Street, Dundee, DD1 1HG, to whom completed application forms should be returned not later than 30 May, 1980.

Colleges and Institutes of Higher Education

Hull College of Higher Education

This developing college is seeking to appoint personnel with good academic qualifications, relevant industrial/commercial and teaching experience, supported by an interest in research and consultancy activities or curriculum development. A range of CNAA degree, BEC/TEC diploma and other professional vocational courses is offered at the college.

Applications are invited for the following posts:

FACULTY OF BUSINESS

Finance and Management Accountancy

Management—Psychology

Management—Purchasing and Supply

Industrial Relations/Law

Trade Union Studies

FACULTY OF HUMANITIES, EDUCATION AND SOCIAL STUDIES

Special Education/Work with children with learning difficulties

FACULTY OF SCIENCE, MARITIME, AND ENGINEERING STUDIES

Fisheries Studies (2 Posts)

Maritime Studies

FACULTY OF ARCHITECTURE, ART AND DESIGN

Graphic Design

Photography

Most appointments will be at the Lecturer II/Senior Lecturer grade. Although, exceptionally, consideration may be given to appointment at the Principal Lecturer Grade.

Salary Scale: (Subject to Review)

Principal Lecturer: £8,415-£9,195 (bar) £10,365

Senior Lecturer: £7,662-£8,385 (bar) £9,411

Lecturer II: £4,800-£7,866

Further particulars and application forms may be obtained from Mrs. D. Liddell, Personnel Section, Hull College of Higher Education, Queens Gardens Site, Hull, HU1 3DH (Telephone 0482 29121, Ext. 238).

Closing date: Friday, 30th May, 1980.

the College of Ripon & York St John

APPOINTMENT OF TEMPORARY LECTURER

GRADE II (FRENCH STUDIES)

Applications are invited from well-qualified graduates or graduate equivalents for the above post in the Church of England Voluntary College of Higher Education (1,700 men and women). The College, which was formed in 1975 through the amalgamation of The College, Ripon, with St. John's College, York, offers courses leading to the following Collegiate awards of the University of Leeds—B.A./B.Sc (Hons. and Ord.) degree, B.Ed. (Hons.) degree, Diploma in Higher Education, Post-Graduate Certificate in Education, the post-experience Certificate in Applied Social Studies, the Diploma in Special Education and the Certificate in Education for Teachers of Nurses. The College also offers courses leading to the award of the Diploma of the British Association of Occupational Therapists. The appointment, which will be at the appropriate point on the Lecturer Grade II Scale (£4,800-£7,866) will be for one year from 1st September, 1980, to 31st August, 1981.

The person appointed will be required to teach French language to degree level standard and to assist in courses on contemporary French society and institutions. The successful applicant will also be expected to help with the preparation of teachers of French.

Further details of the post and application forms may be obtained from the Principal, The College of Ripon and York St. John, Lord Mayor's Walk, York YO3 7EX, to whom completed application forms should be returned to arrive not later than Monday, 16th June, 1980.

Colleges of Further Education

SURREY COUNTY COUNCIL

NORTH EAST SURREY COLLEGE OF TECHNOLOGY

Reigate Road, Ewell, Surrey KT17 3DS

Applications are invited for the following post which is available from 1 September, 1980:—

Head of the Department of Management Studies

(Grade IV Department)

The successful applicant will lead the newly created Department of Management and be responsible for a wide range of College based and industry based Management courses. He/she should have a good honours degree or equivalent qualification coupled with extensive experience in teaching Management courses.

Salary Scale:

In accordance with the latest Burnham Scale for teachers in establishments of Further Education.

Plus £177 p.a. London Fringe Allowance.

Generous relocation expenses in approved cases.

Stamped addressed envelope please for further particulars and application form from the Vice-Principal.

Surrey Education Committee

North East Surrey College of Technology

Reigate Road, Ewell, Surrey KT17 3DS

Required as from 1st September, 1980:

Lecturer I in Secretarial Studies

To teach Typewriting, Shorthand (Pitman 2000) and at least one of the following subjects: Office Practice, Secretarial Duties, Commerce, Audio Typing.

Salary: LECTURER I: £3,768-£6,438 (currently under review following Clegg recommendation) Plus £177 p.a. London Fringe Allowance.

Generous relocation expenses in approved cases.

Stamped addressed envelope please for further particulars and application form from the Vice-Principal.

HEREFORD AND WORCESTER COUNTY COUNCIL

WORCESTER TECHNICAL COLLEGE

DEPARTMENT OF SCIENCE AND MATHEMATICS

LECTURER Grade II — Physics

The above post which will involve teaching physics to a wide range of courses, including C.O.P. to degree, G.C.E. A level and T.E.C. certificate is available from 1 September, 1980.

Applicants must have a degree or a professional qualification, qualification and/or industrial experience.

Salary: £4,800 to £6,366 (subject to review). Position on this scale is dependent upon qualifications and experience.

Further details and application forms may be obtained from the Principal, Worcester Technical College, Deansway, Worcester, upon receipt of a S.A.E.

AYR

THE WEST OF SCOTLAND AGRICULTURAL COLLEGE

HEAD OF HORTICULTURE/ HEAD OF ENGINEERING

Applications are invited for the post of Head of Horticulture and Head of Engineering Department which will become vacant in the present session. Salary scale: Principal Lecturer 2 (Head of Department) £8,415-£9,195 (bar) £10,365.

Candidates should possess an appropriate degree or equivalent qualification and have a wide knowledge of Commercial Advisory Work and Horticulture for the former post and of Agricultural Engineering for the latter appointment. Applications should be addressed to the Principal, The West of Scotland Agricultural College, Auchincruive, Ayr, KA6 5HW, from whom further particulars may be obtained. Closing date for applications: 30th June, 1980.

Research Posts

THE OPEN UNIVERSITY

FACULTY OF EDUCATIONAL STUDIES

RESEARCH ASSISTANT

It is proposed to appoint a temporary RESEARCH ASSISTANT for one year from September 1980 to assist in the work of a group of historical case-studies of the role of the intelligentsia in organisations of the labour movement in Europe. The post, to largely based in London, is expected to begin the successful applicant will have a good first degree in a relevant subject, preferably in History or Sociology, and research experience.

Salary: Grade 1A (A) depending on the point on the scale, £4,402-£5,059 according to age and experience, and the point on the scale for Research Assistants (£4,402-£5,059). Further particulars and application forms (quoting reference A/79/80) from Miss P. Bell, Personnel Division, The Open University, Walton Hall, Milton Keynes MK7 6AA, to whom completed forms should be returned not later than 9 June, 1980.

THE PHARMACEUTICAL SOCIETY OF GREAT BRITAIN

RESEARCH ASSOCIATE

A GRADUATE IN PHYSICS, preferably possessing a Ph.D. or equivalent, is required to carry out an investigation into the physical properties of powders, using a Scanning Electron Microscope. Experience in the use of electron microscopes would be useful but is not essential.

The post is for one year in the first instance, with a possibility of up to two years more, and the salary will be £4,402-£5,059 per annum.

Further particulars and application forms may be obtained from the Establishment Officer, The Pharmaceutical Society of Great Britain, 1 Lambeth High Street, London SE1 7JN. Closing date: 30th June, 1980.

Research Posts

UMIST

Applications are invited from candidates of either sex, for the following posts:

LECTURERS

Ref: BU/79. The successful candidate for the above two posts in the Department of Building will be responsible for teaching and research within the overall discipline of Building. Preferably they will have professional and/or research and teaching experience in one or more of the areas of quantity surveying, construction processes and/or theory, design and construction of structures. Candidates should hold a good honours degree in building, civil engineering, quantity surveying or another construction-related discipline. An appointment may be made at Senior Lecturer level for an outstanding candidate.

Salary will be on the scale £5,052-£10,484 per annum.

POST-DOCTORAL RESEARCH ASSISTANT

Ref: CH/78. The successful candidate will work in the Department of Chemistry, in collaboration with Dr. J. H. R. Clarke on computer simulation of molecular liquids. The project, sponsored by SRC, is concerned with viscoelastic properties including many which are relevant to lubrication technology. PhD and computing experience in physical chemistry or general physics is required for this appointment which will be tenable for up to 2 years.

Salary will be within the range £5,052-£5,725 per annum.

POST-DOCTORAL RESEARCH ASSISTANT

Ref: CSC/77. The Control Systems Centre is seeking to appoint a post-doctoral research assistant in the area of hierarchical and decentralized control for two years, to assist Professor M. G. Singh. A Ph.D. in this or a related area is desirable. The successful candidate should have had substantial computational experience. Salary will be within the range £4,402-£5,759 per annum according to experience and qualifications.

Requests for application forms quoting the appropriate reference should be addressed to the Registrar, Room 66, UMIST, P.O. Box 88, Manchester M60 1QD. The closing date is the 6th June, 1980.

LIVERPOOL POLYTECHNIC

LIBRARY SERVICE

STOCK EDITOR (Acquisitions Librarian)

£5,973-£6,381 p.a.

The Central Services Unit requires a Stock Editor/Acquisitions Librarian to take charge of book-ordering, stock control, deployment and relegation of library material.

Applicants should be Chartered Librarians with experience of the kind of work in academic libraries.

Previous applicants will be automatically reconsidered.

Please quote Reference LP/408

ASSISTANT LIBRARIAN

£5,268-£5,784 p.a.

Applications are invited from Chartered Librarians (preferably Science graduates) for the post of Assistant Librarian, Engineering and Science Library. The successful applicant will deputise for the Site Librarian and take responsibility for library services to the Science departments.

Please quote Reference LP/423

CATALOGUER

£3,990-£4,476 p.a.

Duties will include classification and subject indexing. The catalogue is provided in our integrated COM liche format. Cataloguers also undertake classification duties in the various site libraries. Opportunities exist for work in reader services areas. Applicants, who must be suitably qualified, should be capable of cataloguing all physical formats.

Please quote Reference LP/422

Closing date is 14 days from the appearance of this advertisement.

Application forms and further particulars from the Personnel Officer, Liverpool Polytechnic, 2 Rodney Street, Liverpool, L1 2UA. Tel.: 051-708 6620 Ext. 43.

The POLYTECHNIC WOLVERHAMPTON

LECTURER II OR SENIOR LECTURER IN MODERN LANGUAGES

(to cover two languages from French/German/Spanish)

Duties to commence September 1, 1980.

Salary scales (subject to review):

Lecturer, II/SL, £5,229-£9,822

Senior Lecturer, £7,785-£9,822

Further particulars and application forms may be obtained from the Establishment Officer, The Polytechnic, Wolverhampton WV1 1LY (0902-27371—Ansephone service after office hours), to whom application forms should be returned within 15 days of the date of this advertisement.

ASTON IN BIRMINGHAM

THE UNIVERSITY

DEPARTMENT OF MODERN LANGUAGES

Research Assistant

Applications are invited for the above post as RESEARCH ASSISTANT in the DEPARTMENT of MODERN LANGUAGES to provide assistance to Dr John Trotter, lecturer in History of European Universities, in the transcription and editing of the Internal Accounts of Merton College, Oxford, of the Tudor period. The documents are made by the Sub-Warden, the three Bursars, and other College officials and are for the most part in Latin. The appointment will commence on 1st September 1980 and will be for a term of nine year with the possibility of an extension of two years, providing finance is available.

Essential qualifications include a relevant degree at 2i or better and experience of working on original material of the period. Up to six hours teaching per week will be expected from a full-time position as part of the duties of the post.

Commencing salary will be within the range £4,402 to £5,759 p.a. dependent on age, qualifications and experience.

Application forms and further particulars may be obtained from the Staff Office, quoting Ref. No. 41/1561, University of Aston in Birmingham, Gosta Green, Birmingham B4 7ET (Tel: 021 359 3611 Ext. 2041) and applications should be forwarded not later than 3 weeks after the appearance of this advertisement.

LANCASTER

THE UNIVERSITY

CENTRE IN SIMULATION RESEARCH ASSOCIATES

A post of RESEARCH ASSOCIATE in the S.D.C. supported Centre. Applicants should be mathematically and is tenable for one year. Applicants should preferably have research experience in simulation and an interest in simulation system design.

The successful applicant will be expected to give a proportion of their time to teaching programmes in a variety of languages.

Salary on the scale £4,402 to £5,759.

Further particulars may be obtained quoting reference LT84/C1 from the Establishment Officer, University House, Lancaster LA1 4YW, to whom applications (six copies) naming two referees should be sent by 6 June 1980.

EDINBURGH

UNIVERSITY

COMPUTER SCIENCE DEPARTMENT

POSTDOCTORAL RESEARCH IN COMPUTATIONAL COMPLEXITY

Applications are invited for an SRC funded postdoctoral research position in the analysis of algorithms—computational complexity area. The appointment will be for up to two years from October 1980, with starting salary in the point in the scale £5,052 to £8,063 according to age and experience.

Applications should be sent to Dr. L. Valiant, Computer Science Department, King's Buildings, Edinburgh (from whom further information may be obtained). Please quote reference 5028.

LEICESTER

THE UNIVERSITY

SCHOOL OF EDUCATION

RESEARCH FELLOW and RESEARCH ASSOCIATES

GROUP WORK IN THE PRIMARY SCHOOL

Salary Scales: Research Fellow £4,035-£10,484. Research Associate £4,402-£5,759.

Two RESEARCHERS are required to work on a three year project examining the nature of group work in primary and middle schools. The project will begin on 1st October, 1980.

The research, which is funded by the Social Science Research Council, is direct, multivariate, longitudinal, 5-year survey which has identified a variety of common procedures used by teachers and which has examined their quality and their impact on pupil performance. It seeks to provide a framework for the effective use of one of the procedures, that cooperative working by pupils in groups, by involving detailed study of the organisation of teachers' and children's work, by using technical assistance from systematic observation.

For one researcher training in statistics and experience of computing is essential. The other should have a degree in statistics or mathematics and an interest in the application of statistics to social research.

Applications (six copies) giving details of age, qualifications and experience, together with the names of three referees, should be sent by June 16, 1980, to the Personnel Officer, The University of Hull, Hull HU6 7RX, from whom further particulars may be obtained.

UMIST

RESEARCH ASSISTANT

DEPARTMENT OF HISTORY OF SCIENCE AND TECHNOLOGY

Ref: HS/83/CJ. A suitably qualified graduate, preferably with research experience, is required to work for up to three years from October, 1980, on the recent history of hospitals in the Manchester Region.

Salary will be in the range £4,402 to £5,059 per annum.

Requests for application forms and further particulars, quoting the above reference, should be addressed to the Registrar, Room 66, UMIST, PO Box 88, Manchester M60 1QD. The closing date is June 16, 1980.

SOCIAL SCIENCE RESEARCH COUNCIL

RESEARCH UNIT ON ETHNIC RELATIONS

UNIVERSITY OF ASTON IN BIRMINGHAM

ONE SENIOR RESEARCH FELLOW

TWO RESEARCH FELLOWS

Are required to carry out a major longitudinal study concerned with the economic, social and ideological mainsprings of the educational system and the consequences of any attempt to change them.

The Senior Research Fellow will be responsible for the direction of the project. Salary will be in the range £5,052 to £10,484 (Senior Research Fellow Grade IV). The Research Fellows will be appointed to Grade 1A (A) (£4,402-£5,059) and the Research Assistant (Grade 1A (A) for two years or longer (£4,402-£5,059).

Application forms and further particulars can be obtained from Mrs Peters, Personnel Officer, Aston University, Aston Triangle, Birmingham B4 7ET. Tel. 021-359 3611 Ext. 2041 (quoting reference).

WOLVERHAMPTON

THE POLYTECHNIC

RESEARCH ASSISTANTS

Applications are invited for posts available for work on the following research projects from 1st October, 1980.

ENGINEERING

(1) Developments in Special Bearing Systems.

SOCIAL SCIENCES

(2) An investigation of characteristics determining effectiveness of social work students.

BIOLOGICAL SCIENCES

(3) Gonadotropic differentiation in British Brown.

(4) Role of peroxisomes in lipid metabolism.

(5) Subcellular studies on the mechanism of action of plant hormones.

(6) Biology of tree seedlings in the Western Midlands.

(7) Fermentation processes in production of phytophthorous fungi.

Current salary starts at £5,276 per annum.

Applicants should hold, or expect to hold a first or upper second class honours degree in a related discipline. On successful completion they will be expected to register for a CNAA doctoral degree.

Further details and application forms from: Personnel, The Polytechnic, Wolverhampton, Wulfruna Street, Wolverhampton WV1 1SB (24-hour Ansephone).

LEEDS

THE UNIVERSITY

SCHOOL OF ECONOMIC STUDIES

Applications are invited for a post of RESEARCH FELLOW in the above School. The appointment will be made on the field period of up to three years. Applicants should have post-doctoral research experience, preferably in the field of Trade Union History and a knowledge and understanding of the Trade Union movement.

The post is supported by the Yorkshire Area of the National Union of Mineworkers and has been established to facilitate the compilation of the first volume of the history of the Yorkshire miners since 1881. The successful applicant will work with Professor V. L. Allen and have the status of co-author with scope for considerable research and writing initiative.

Salary at an appropriate point on the 1A scale for Research and Analogous Staff (£5,052 to £8,759) according to age, qualifications and experience.

Application forms and further particulars may be obtained from The Registrar, The University of Leeds, Leeds LS2 9JT, quoting reference number 31/20 (Duplicate forms for overseas applications). 13 June 1980.

Administration

KENT

THE UNIVERSITY AT CANTERBURY

Applications are invited from graduates or those graduating in 1980 for a post of ADMINISTRATIVE ASSISTANT in the REGISTRY DIVISION of the SECRETARY'S OFFICE in the FACULTY OF SOCIAL SCIENCES. The appointment will be made in the lower grade of the Administrative Grade IV scale: £4,402 to £5,759.

Application forms and further particulars of the post will be sent upon receipt of a stamped addressed envelope (9in. by 4½in.) by the Establishment Officer, The Registry, The University, Canterbury, Kent CT2 7NZ (please quote reference A13/80 on the envelope). The closing date for the receipt of completed applications is Monday, 16th June, 1980.

SOUTHAMPTON

THE UNIVERSITY

ACCOMMODATION OFFICE

Applicants should have good academic qualifications and ability, some experience in accommodation administration and a knowledge of the Southampton Area.

Duties include work with Advisory and Examination Boards in connection with Further Education and collation and maintenance of statistics. The office is located in central Birmingham.

Candidates, male or female, must obtain application forms by Monday, 16th June, 1980, for further details from Mrs. A. J. Smith (ext. 3651), University of Southampton, Southampton. Hants SO9 5NH to whom applications (four copies) should be submitted by June 20, 1980. Quote Ref. 3/3/3/3.

Council for National Academic Awards

APPOINTMENTS IN RESEARCH DEGREES UNIT

Applications are invited for the following posts within the Research Degrees Unit of the Council.

Assistant Registrar

The present post holder has been appointed to a senior academic post at another institution. In addition to their work in specified fields, Assistant Registrars are involved in the development of academic policy. Candidates for the post should be well qualified academically and should have had appropriate teaching and/or academic administrative experience, preferably in the field of Higher Education.

The salary on appointment will be within the scale £7,701-£9,771 per annum (merit bar £8,889 p.a.) (under review) including London Weighting.

Executive Officer

Applicants should preferably be graduates with some experience of work in higher education, but other appropriate administrative experience may be considered. In addition the ability to type is essential.

Salary within the range: £5,397-£5,856 p.a.

Further particulars of both posts may be obtained from

Assistant Secretary (Personnel), Council for National Academic Awards, 344/354 Gray's Inn Road, London WC1X 8BP. Tel: 01-278 4474

in whom applications giving details of qualifications and experience and the names and addresses of two referees should be submitted by 9 June, 1980.

ilea INNER LONDON EDUCATION AUTHORITY

Chief Inspector

(Further, Higher and Community Education)

Salary Range: £17,684-£19,520

Inclusive (under review)

The post holder will be required to undertake overall responsibility for inspectorate co-ordination and to advise on policy across the whole field of further and higher vocational education in Inner London.

Within the aided and maintained service of the Authority there are 5 polytechnics, 23 specialist and general colleges of further and higher education, 4 colleges of art, 2 colleges of education and a large number of non-vocational education establishments.

Applications are invited from professionally qualified graduates who have extensive and responsible experience in teaching and management within further and higher education.

Further details and application forms are available from the Education Officer (EO/Estab 1B), Room 367, the County Hall, London SE1 7PB. (Please enclose a stamped addressed envelope).

Completed forms to be returned by 30 May 1980.

HULL

THE UNIVERSITY

UNIVERSITY SAFETY OFFICER

Applications are invited for the above post which is tenable immediately. Applicants should be GRADUATES IN SCIENCE AND SCIENCE or ENGINEERING or hold a comparable qualification. They should also have substantial experience in safety administration: an occupational safety qualification would be advantageous. The person appointed will act as adviser to the university on safety matters in relation to the implementation of safety policy and will have specific responsibilities in routine inspection, accident and workshop safety, fire precautions and safety training in office and domestic areas. The University Safety Officer is required to cooperate with specialists in other fields and to promote a high level of safety consciousness in staff and students.

Salary will be on the scale £6,426 to £10,484 per annum with membership of the University's superannuation scheme.

Applications (six copies) giving details of age, qualifications and experience, together with the names of three referees should be sent by June 16, 1980, to the Personnel Officer, The University of Hull, Hull HU6 7RX, from whom further particulars may be obtained.

BIRMINGHAM

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Applicants should have good academic qualifications and ability, some experience in administration, secretarial and a knowledge of the Further Education field.

Duties include work with Advisory and Examination Boards in connection with Further Education and collation and maintenance of statistics. The office is located in central Birmingham.

Candidates, male or female, must obtain application forms by Monday, 16th June, 1980, for further details from Mrs. A. J. Smith (ext. 3651), University of Southampton, Southampton, Hants SO9 5NH to whom applications (four copies) should be submitted by June 20, 1980. Quote Ref. 3/3/3/3.

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Colleges of Education

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(H.M.C.)

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Particulars of the post are available from the Chairman of Governors, Kent College, Canterbury, to whom closing date for applications is 13 June, 1980.

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Applicants should be qualified designers with recent experience of Professional Practice and/or teaching at degree level.

The annual salary will be within the scale £4,722 to £9,021 under review.

Further particulars and application forms may be obtained from the College Secretary, Duncan of Jordanstone College of Art, 13 Perth Road, Dundee (telephone number 0382 23261), to whom completed applications should be returned not later than Friday, June 13, 1980.

DORSET

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DEPARTMENT OF VISUAL COMMUNICATION

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Salary scale £6,690-£7,866.

Application forms and further particulars from the Registrar, Bournemouth and South Coast Area of Arts and Design, Royal London House, Bournemouth (Telephone 0202 527261).

Applications should be received within 21 days of the appearance of this advertisement.

SURREY ART COLLEGES DISPUTE

NATFHE is in dispute with Surrey this year over redundancies. Members are asked not to apply for jobs at Lasson, Guildhall or Cert Surrey colleges of art and design.

Among requiring information on the situation should contact Jim Kilmurry at NATFHE, Hamilton House, Mabledon Place, London WC1. Tel. 01-387 8600.

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Overseas

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SCHOOL OF BUSINESS STUDIES

The School offers a Bachelor of Business degree with five streams in Accounting, Administrative Studies, Finance, Information Management and Information Processing, and two Graduate Diplomas in Finance and Management Studies.

Applications are invited for the following positions. Successful applicants will be required to commence teaching in February 1981 or July 1981.

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To teach introductory, management, and financial accounting. The ability to teach in the areas of accounting theory and/or contemporary accounting issues will be an advantage.

Administrative Studies

To teach in the areas of organizational theory, managerial processes and policy, and the environment of organizations.

Business Workshop

To assist in developing materials with a multi-disciplinary approach for the business workshop. To conduct workshop sessions and/or seminars. To assist in fostering and maintaining contacts with the public and private sectors, and with other tertiary institutions.

To prepare end-teach courses in small business management.

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To teach in the areas of business/economic statistics and quantitative methods. The ability to teach economics is an advantage and knowledge of computer languages is desirable.

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To teach in the areas of systems analysis and systems design. In addition, the successful applicant may be required to teach programming.

Visiting Fellow in Accounting

Applications are invited for the position of Visiting Fellow in Accounting for 1981 or for 1982. The Fellow will conduct seminars in both graduate and undergraduate courses in accounting. Applicants should be well qualified academically and have business and/or teaching experience. Salary and travel arrangements will be negotiated.

Visiting Fellow in Finance

Applications are invited for the position of Visiting Fellow in Finance for 1981 or for 1982. The Fellow will conduct seminars for final year undergraduate students and for post-graduate courses.

The Fellow is expected to be an experienced academic and/or practitioner in the field of finance who has completed a graduate level research degree in finance and/or has relevant publications.

Salary and travel arrangements will be negotiated.

SCHOOL OF TEACHER EDUCATION

The School offers pre-service courses for the Diploma of Teaching, post-experience courses for the Bachelor of Education degree and postgraduate diplomas in specialized fields.

Applications are invited for the following positions from suitably qualified persons with relevant experience, including experience in schools.

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To teach courses in the psychological foundations of early childhood education, with particular reference to the age range 3-8 years.

Educational Psychology

To teach courses in remedial and special education

OR

to teach courses in child growth and development.

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To teach courses in school library resource centre services with particular reference to the use of audio-visual materials and equipment.

Visiting Fellow—Early Childhood Education (3-8 years)

Applications are invited for the position of Visiting Fellow in early childhood education for 1981 or 1982.

The Fellow will be expected to have good relevant experience and to have demonstrated a strong recent background in early childhood education in curriculum areas associated with nursery schools and/or kindergartens.

Salary and travel arrangements will be negotiated.

Visiting Fellow—Primary Education (6-12 years)

Applications are invited for the position of Visiting Fellow in primary education for 1981 or 1982.

The Fellow will be expected to have relevant experience in the field of corrective and remedial education and the background and capacity to train teachers as specialists in providing effective treatment of the learning problems of children in normal primary classes and remedial classes. Applicants with experience in other curriculum areas will also be considered.

Salary and travel arrangements will be negotiated.

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Applications are invited for the position of Supervisor, Audio Visual Centre (Senior Lecturer level).

Applicants will be expected to have an appropriate postgraduate degree, preferably in the applied or social sciences. Experience in the use of media within an educational context is essential. Applicants must have had particular experience in at least one of the following areas: film, radio, television, graphic arts, or journalism. The successful applicant will have overall responsibility for the operation of the Audio Visual Centre, and will be responsible for the planning, development and maintenance of audio visual services to students and teaching staff.

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Two senior members of staff will visit the United Kingdom in 1980 and candidates who have been short-listed may be offered the opportunity to attend an interview.

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Appointments may be made at the level of Senior Lecturer I or II, Lecturer I or II, or Assistant Lecturer depending on qualifications and experience.

QUALIFICATIONS:

A suitable tertiary qualification, preferably at graduate level, together with evidence of high capacity and, where applicable, membership of professional bodies. Relevant professional experience is essential.

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CONDITIONS OF SERVICE:

These are similar to those in universities and in other colleges of advanced education in Australia.

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Closing date Friday 27th June, 1980 in London.

Interested persons should write quoting reference CHI requesting the usual format of application, to:

The Migration Officer,
Western Australia House,
115 Strand, London WC2R 0AJ.
Telephone: 01-240 2581

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Head of Department of Graphic Design

(Ref: 80/18)

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Salary: $A27,843 p.a.

Written applications (in duplicate) quoting the reference number, and including personal and career details and the names and addresses of two referees, should be addressed to the Staff Officer to reach him by 30 June 1980.

Caulfield Institute of Technology, 900 Dandenong Road, Caulfield East, Victoria, 3145, Australia.

REMINDER

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The closing date is [illegible] 1980.

TIMES HIGHER is seeking English structure for Japan. Interested candidates for Japan, interested in working overseas, contact Times Higher Education Supplement, Priestley House, 26 Red Lion Square, London WC1R 4HQ. Tel. 01-837 1234 (Ext. 575). Telex 264971. Quote Box 88, Tokyo 100-91 Japan.

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Nasim Teachers' College, Suva — 80 K 30

ENGLISH LANGUAGE SPECIALIST (TECHNICAL/COMMERCIAL)
Fiji Institute of Technology, Suva — 80 K 31

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Service English Unit, University of Jordan — 80 K 13

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Department of English, Chancellor College, University of Malawi, Zomba — 80 K 24

LECTURER IN COMMUNICATIONS/ENGLISH (ESP)
Rural Development Department, Bunda College of Agriculture, University of Malawi, Lilongwe — 80 K 25

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THE BRITISH COUNCIL

THE NEW SOUTH WALES INSTITUTE OF TECHNOLOGY
SYDNEY, AUSTRALIA

FACULTY OF BUSINESS STUDIES

ASSOCIATE HEAD

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Applicants should have a particular interest in *the policy/strategy* field, and in the quantitative aspects of management and should possess an appropriate doctoral qualification. The successful applicant will be required to provide academic leadership in these areas.

Teaching experience in higher education is essential and practical experience in business or consulting is desirable. Administrative ability and leadership qualities are required of the successful applicant as he/she will be delegated appropriate responsibilities in the operation of the School while the present Head of School is Dean of the Faculty.

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METHOD OF APPLICATION

Dr. B. J. Hunt, Dean of Business Studies, will be visiting London on June 19-20. Applicants and intending applicants could interview Dr. Hunt on those days. Arrangements can be made for interview by contacting "The N.S.W. Government Offices, (Miss Margaret Challoner), in London before the above dates.

Closing date: close on June 30, 1980. Applicants should arrange for two confidential referees' reports to arrive by the same date.

Applications should include: address; phone number; personal particulars, documentary evidence of qualifications; work and teaching experience; additional publications; research projects undertaken and the names and addresses of the referees contacted.

Applications and referees' reports should be sent to:

The Agent General, N.S.W. Government Offices, 66 Strand, LONDON WC2N 5LZ.

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A position description should be obtained from Staff Branch, RMIT, Box 2476V, G.P.O. Melbourne 3001. Applications quoting ref. no. 151-09-AN to the Registrar by 5.7.80.

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Courses

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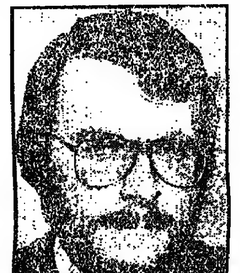
Science today

Finniston's wake: pause for thought



Robin McKie

For followers of Sir Monty Finniston's committee and its radical recommendations for renovating Britain's engineering profession, there has been a frustrating hiatus following publication of the final report while it has been dissected, disseminated, analysed, scrutinized and generally pulled to bits by all interested parties.

Not surprisingly, there has been no firm line of consensus in these responses, except that different people are opposed to different bits of the report. Indeed, if all their views were taken into account there would be precious little left to implement.

And it is the engineering institutions—the present regulators of professional standards—which have been the real guilty parties. In comparison with industry, trade unions and academics, who have been quite positive, they have shown a distinct narrowness of vision, misreading much of the report to create Aunt Sallies which they have then knocked down.

A favourite among these, is the common, and frequently shrill, complaint about Government control over the new engineering authority. Professional engineers will be tied down, regulated and generally bullied by a group of grey civil servants, the argument runs.

Instead, many institutions wish the new authority to be supervised by the Privy Council, a desire quite out of line with a body that at present nominates only one or two lay members to existing organizations. If required to appoint to and control the authority, the Privy Council would merely turn to the relevant Government department for advice, thereby rendering control straight back to the dreadful civil servants—but in a far more secretive and roundabout manner.

In fact, civil servants at the Department of Industry who are at present digesting the report and its responses view Government finances as a mere pump-priming exercise to set up the authority. After five years it would be self-financing, it is planned, and would raise its cash from industrial levies.

Yet these characterings do disguise an ominous silence from one vital source—Sir Keith Joseph, the Industry Secretary on whom implementation of the report depends. Sir Keith, it is known, is taking advice about Finniston issues both inside and outside Whitehall.

Apparently, he has many sources of action—except, as one senior civil servant pointed out to him recently, one which allows him to do anything at all. Certainly, Finniston has raised too many issues and hopes which cannot now be quietly forgotten.

If nothing else, the report and the ensuing debate has done little for the Council of Engineering Institutions, which runs the current professional register for engineers, and which has now been virtually written off as an entity by Whitehall. To replace it, considerable and detailed thought is now being put into the exact form and powers of the succeeding body—the engineering authority of Finniston's report.

Yet it would be a mistake to think that if the Government does decide to set up the authority—and current thinking at the Department of Industry certainly favours this course of action—that the body's principal role will be to act as an independent registration board and an accreditation council for university engineering courses.

In fact, a more general and less particular result is intended for the authority. It is far more likely that it will simply be given broad powers, on instruction to get on with the job of boosting British manufacturing and be left to act "as the engine for change" as proposed in the Finniston report.

Sir Keith, of course, is deeply suspicious about the worth of any Government interference in any public arena—his own unfortunate experiences in housing and the health service probably only reinforce this prejudice.

Yet the Government must act, and act promptly and positively. There has been no indication of industry, universities and engineering institutions being able to come together in the past to save engineering and the country's manufacturing capacity, so it is clear among intervention is now desperately needed.

The real problems only arise when one considers who should be on the authority's board controlling the engine that is to change British industry. Industrialists must form a distinct majority there and the board must certainly avoid the pitfall of becoming a retiral group for past institution presidents. August as these men may be, in no way do they have the clout and industrial influence possessed by top practitioners of engineering and manufacturing.

By next month, we should have a clearer idea of how the Government intends to respond to these issues. It is to be hoped the reaction is as positive as the recommendations of the original report.

New formula needed to solve maths problem

Keith Hampson

The Commons worked as usual during last week's ill-fated Day of Inaction—with all union-sponsored MPs turning up for work as far as one could tell. On the Local Government (No 2) Bill committee we even had the spectacle of former Labour minister Guy Barnett rushing back from a march against Government spending cuts—where he seemed to have acquired first-degree sunburn—to speak fiercely against proposals to spend unprecedented sums on London's docklands through one of the new Urban Development Corporations.

Such illogicality on Mr Barnett's part is perhaps understandable. He clearly found the idea of establishing the equivalent of a New Town Corporation for a derelict, neglected area, the possibility of ending a generation of squabbling and inaction, just too much of a challenging innovation.

Scare stories about the proposed UDC have abounded and some have been presented with great authority. But at the heart of the Labour Opposition's objections is the *cri de coeur*: "Do not change old ways—the people of Docklands don't want a development corporation." Are we to believe that they wish to continue living in an industrial wasteland in blackened, run-down streets, where the only signs of brightness and warmth are to be seen in the equipment they truly prefer (ideology to action?

Behind the constant battling of the political parties lie human problems that can only be tackled with clear-sightedness and a willingness to experiment with new ideas. But political rhetoric too often intrudes—as we saw with Mr Barnett.

We are about to see the Labour party do another "Conservative knee-jerk" over school sixth forms.

Most of our major towns are now back in Labour hands. These are the areas which will feel the fall 30 to 50 per cent drop in the birthrate. Sixth forms that are already small are about to shrink much further. The logical implications should be clear. Pupils should be concentrated in the schools where there are enough skilled teachers to maintain A-level standards.

It means living off the over-16s creating sixth-form colleges or setting up tertiary colleges to maintain the quality of academic courses. It also means setting up the type of vocational education and work experience packages that will prove attractive to less academic pupils who neither need nor want to hang on in school.

But the chances of such logic prevailing are slim. So far most Labour education committees have stood by the purity of the comprehensive principle which insists that every secondary school must have its own sixth form. Most people in higher education have not yet woken up to the scale of the disaster this stiff-necked approach will wreak on them.

The crisis point has already been reached in maths, sciences and languages. We are more than 4,000 maths teachers short and we need another 2,000 physical science teachers. How are we meeting the demand? A total of 8,627 candidates have been accepted for teacher training next year, of whom only 22 are opting to teach physics and 20 chemistry. Astonishingly, 1,740 want to teach PE. Much use they will be in filling the trench in sixth form standards.

What is so extraordinary is that in little has been done, particularly in areas such as mathematics, where the need for action has been obvious, urgent and is long overdue. It is more than ten years since the issue arose in the correspondence columns of *The Times*. Better mathematics teaching will not come about without better maths teachers. Yet nothing at all emerges from the Government until, under pressure both inside and outside the Commons, they launched a retraining scheme in shortage subjects in May 1977; and after two years of argument launched a Government inquiry into maths teaching—which is still sitting.

Some stimulating draft circulars on the crisis of the sixth form were prepared four years ago. But though Mrs Williams had a justified reputation for eager and open-minded discussion, she had little capacity for making decisions. So, with the NUT and the other teaching unions weighing in with talk of "behonding the schools", this admittedly murky, area was left alone. But the problem has not gone away, and if not tackled soon—from a number of directions—academic sixth form education as we have known it will not survive.

Some drastic crash measures are clearly needed. If ministers are anxious about a more vigorous approach to the curriculum they will have to back NUT opposition to differential salaries and establish special merit awards for maths teachers; they will also have to grasp the nettle of differential student grants, possibly by linking scholarships to certain designated courses. Such an approach might just head off disaster, while a long-term programme of support emerges from the deliberations of the Cockcroft Committee.

Maths is of course, only one problem area, critical though it is. Can it be right that modern languages across the country should be so at risk?

Is there anything higher education itself can do—other than cursing and having to live with whatever quality the schools turn out? I think there is. The tendency has been for the universities to see the answer in larger courses. But we really need some mechanism for enabling them to help directly to maintain academic standards in the schools. So why not twin key departments, like maths, engineering or languages, with particular schools within reasonable striking distance of the university or polytechnic? Lecturers could bring a new dimension of opportunity and challenge to sixth formers and teachers alike. Such contacts could change the atmosphere to the point where maths or technology became endowed with a status they have not previously possessed. There is enormous potential for exploiting the immense resources of higher education as resources course for our schools.

Don's diary

Saturday

One feature of our week-ends we all enjoy are our dinners. Three friends arrive—all ex-Aberystwyth. We talk through our experiences of higher education and compare them with which we consider to be the contemporary experiences. Someone observed that the value of the experience was heightened for us because of our relative naivete and our un-worldly home backgrounds—young people today (someone said) are so worldly and "knowing" that their experience of university cannot possibly be such a rich one. Looking back, my major feeling has always been one of intellectual disappointment in not being challenged or forced to experience some kind of catharsis which might change my world views. No one else around the table shared this—"you don't go to university for that kind of thing!".

Sunday

No *Sunday Times*. . . . It's strange how the absence of this paper has such an enormous effect on our Sunday morning. Everything we do is more casual—no rush to get at the reviews, more relaxed—no exploitives at the latest news and more peaceful.

We visit friends at a village near Cardiff. They've a large house that needs a lot doing to it and a large garden which needs even more doing to it. Lynne, James and I all help to knock down a garden wall and drink cider. Glyn (being only eight months) just lines the cider. I enjoy the physical effort and the products of this labour. It's more fun than riding the exercise bike our staff association has purchased at work.

Monday

The retiring vice-chancellor has proposed 65n of changes to the university structure—getting rid of one faculty, reducing regional staff by almost 50 per cent but increasing the work load of these staff, dissolving some units, changing the structure of the degree profile, creating some new units, tampering with the administration and reducing our reliance on undergraduate activities and increasing our dependence on continuing education. His paper is a real morale booster!

Still, some change is necessary. The questions are when and who. I'm willing to change my job if the university offers me the opportunity to develop skills and to maximize the skills I have. I have a fear, though, that the opportunities to be made available are all going to be denied of some major skill area and less satisfying than my present job.

I'm impressed with the way colleagues are responding to the vice-chancellor's proposals. No suicides. No resignations. Lots of jocularity (someone's running a book on who will be the first to go). Lots of interest in early retirement.

I write to my life insurance company and say that having noted that my drop dead value is £39,420, I'm willing to promise to do absolutely nothing with the rest of my life if they promise to hand over the money now.

Tuesday

Student telephones to complain about a tutor. "He's given me a D for my essay and I know I'm not a D material." I've been here before. "I am a teacher, you know, I do know about education and the curriculum." It doesn't seem to me that she does. I explain the appeals procedure the OU has. "You shouldn't employ tutors who don't recognize talent." I assure her that our tutors (especially those with summer school experience) are very gifted at spotting talent. "I think I should have got an A or B, but I am not D material!" I wish she'd de-materialize. "Do you think he has some psychological problem, this tutor?" I'm beginning to develop one. "I mean, do you think his mind's on the job." Just ignore her, she'll go away I say to myself. You think it will make him more disturbed than he already is?" I assure her that Dr X is a mature person and will be psychologically strong enough to cope with her appeal. She leaves it at that.

I also deal with requests for summer school excusal today. Lots of mums with very young children and lots of disabled students.

Wednesday

Wednesday is a writing day. I pick up my unit for the new introductory course in statistics—DEMAST242 and do some more. (The receptionist has been instructed to tell callers that I am nailed to DEMAST!) During the course of the morning—in between tackling the teaching of confidence intervals, regression and chi-square—I phone home a little on the course as a whole. After all, when other university is planning and working on a multi-media, inter-disciplinary course in statistics which will attract between 10,000 and 15,000 people during its life? Also, where else can one work on a course about statistics which is actually fun to work on. We are all hoping that we can make a major contribution to the teaching of statistics to the non-mathematicians, but there's a lot of work to do yet.

Thursday

Out of Abergavenny to do some presentations. We are opening a new centre there in 1981 and want to ensure a good student population. The manager of one building society on the High Street is an OU student who has been persuaded to display our display boards. A press conference brings three journalists and we talk about the OU. Surprising ignorance about our non-degree work and lack of knowledge about the regional operation of the university.

On to Caerleon to brief some staff. One had just come from listening to a visiting lecturer talk about "why Plato was nearly right about education". I enjoy these sessions. The success of the Open University is largely due to the work of the part-time staff in elaborating materials and humanizing learning. Having talked to these staff for two hours I can fully understand why OU students demand more time with their tutors.

Finally, on to an OU session to do a bit of developmental counselling. We work on the impact of the OU on students' domestic life and upon their sense of achievement so far. The session goes well and I leave them to carry on with some poetry.

Friday

Data day. I am working on three related projects looking at the "output" of the secondary school system for three books in 1981-1982. All day at the Cardiff computer centre preparing programmes and listings for submission only to find a large notice which reads "Due to hardware failures, the ICL will not be available for a considerable time" under which someone has written: "A silver collection for a new electic band will be held at the exit". Oh well, it will be available eventually. It does mean, however, that writing will be delayed by another two or three weeks at least. It always amazes me that this problem does not arise more often.

In the evening I start to work with a group of students in an encounter group. It is our second meeting and expectations are high but self-disclosure is low. I think there is another two days to go before this meeting will finish. And that is another week. . . .

Steve Murgatroyd

The author is senior counsellor with the Open University in Wales.

Union views

Yearly chance to put things right

In this period of sustained anti-trade union propaganda the view is widely expressed that not only do trade unions wield too much power but their executive committees and full-time officials are arrogant, out of touch with their membership, and manipulate the public platform which trade unionism provides for private and/or political ends.

At least once a year, however, the membership generally has the opportunity to register, often quite sharply, its approval or disapproval of the policies and actions which have been promulgated and undertaken on their behalf. Such an occasion is the annual conference of the association.

The annual conference brings the association's year to a close. The ongoing national executive committee has submitted an annual report which has been read in branches and regions. That report, which represents the association's work throughout the year and details its successes, failures, hopes, concerns and disappointments, will be defended before conference.

Certain regions will seek to refer back sections of the report as a mark of disclosure or on grounds of inadequacy—this year for example the paragraphs relating to microelectronics will be referred back by one region, presumably on the grounds that they do not feel the association has paid sufficient attention to this area.

Set against appropriate paragraphs will be motions submitted by the regions of the association. Conference therefore, however imperfectly, reflects the major concerns of members in branches and regions. As might be expected, some are very contemporary issues and call for immediate action. Others are "perennials" and are often restatements of existing policy which regions submit in order to draw to the executive committee's attention their continuing concern. Issues such as superannuation and lowering the age of retirement fall neatly into this category, while redundancy problems facing branches and regions are a good illustration of the former.

It is tempting, but I believe erroneous, to see annual conferences as at best a tremendous waste of time and money or, more cynically, a superficial and spurious exercise in democracy. Some hold that delegates are unrepresentative and the heady atmosphere of seaside towns on Bank Holidays encourages them to pass unrealistic motions which they know will never be implemented.

However, the motions on the order paper are solid testimony to the issues which members feel are central to their professional lives and careers. They are expressions of common concern and the membership elects the national executive committee and pays the staff and officials of the association to ensure that something is done to alleviate these problems. That is why most people join trade unions, whatever their occupation, and that is why annual conferences are a salutary reminder to us all.

maths

To look at the issues which are embodied in the motions is indeed to range over the problems of further and higher education in the public sector. As one would expect, the effects of education cuts and cuts in public expenditure are a recurrent theme in several motions, from cuts in MSC to "capping the pool".

Little of what is said is new, but the speeches from the floor will reflect the anger and frustration felt by the membership. Further and higher education is not a declining industry yet courses are chopped and students turned away, from unemployed youths to mature students seeking second chance opportunities.

In this context redundancies also loom large in members' minds. Repeated notifications are now being received from local authorities and polytechnics and one anticipates that the strength of feeling on this issue will outrun both the motions and the annual report which were both composed some months ago. Such is the rapidity of change in this area that a substantial debate on this question can be expected.

Beyond this at least one "fringe" meeting is likely to tackle the problems facing higher education from this respect. It is often surprising how many delegates, having sat from 9.30 am to 5.30 pm through conference sessions, will then voluntarily participate in yet further evening meetings to discuss some particular issue. Such fringe meetings have been increasing in recent years.

Salaries, too, will be on the agenda as one might expect. Conference, however, discusses the broad issues of salaries since, in theory at least, it follows this settlement of the annual pay claim. This year, with Clegg in the process of being settled, and as at the time of writing, the 1980 claim still in negotiation, membership will doubtless be making known their collective views. A substantial number of amendments raise the problem of part-time staff and research staff, whose anomalous position was pointed out by Clegg. This time the membership are clearly determined to press for such salaries to be properly negotiated.

Educational issues will have an equal allocation of time and attention; TEC and BEC, re-education and training of the 16-19 age group, adult education, higher education are all the subject of more than one motion. If there is little that is new in the motions themselves, this largely reflects the stagnation which has settled over education policy making nationally.

We are still awaiting the report on the 16-19 age group; the Government has yet to indicate what measures it will take for the management and finance of higher education; the calamitous position of adult education is too well known to need restating in this column. So the association will reiterate its basic themes and concerns and rightly and properly so. Hopefully with the presence of Neil Macfarlane and numerous senior officials from the DES there will also be an opportunity to make known the association's views privately as well.

Finally, taken in private session, there will be domestic business; changes to rule, association finance and an interesting motion calling for the association to explore a joint partnership scheme with the AUT. Such matters are generally remitted for further consideration after the views of delegates have been heard. It is a useful way of testing out ideas.

Conference marks not just the close of one year but the launching of a new year of debate and activity. The new executive takes office at the end of the final session and immediately meets to review the policy outlines for the year. The tasks that lie ahead for 1980-81 look particularly daunting!

Jean Bocock

The author is assistant secretary for higher education of the National Association of Teachers in Further and Higher Education.

Liberation at the pace of a glacier

The gradual increase over the last decade in the numbers of women working as academics, librarians and administrators in universities—and particularly in the proportion of senior jobs they hold—is disappointingly slow but hardly unexpectedly so.

In 1969 women comprised 9 per cent of academics: (1 per cent of professors; 6 per cent of senior lecturers; 11 per cent of lecturers and 22 per cent of other—for example research assistant posts). By 1977 these percentages were: 12 per cent (all academics); 2 per cent (professors); 6 per cent (senior lecturers); 13 per cent (lecturers) and 31 per cent (others). The figures for 1978-79 show that the overall percentage of women academics has crept up to 13 per cent, number 5,319).

This resistance to change in the balance of sexes is not surprising. Given the current static job situation and lack of mobility there is even some encouragement from the fact that the numbers of women increased by well over 400 between 1976 and 1979 in a context of little overall growth. But it is disturbing that these increased numbers appear simply to be swelling the numbers in the lecturer, and especially the sub-lecturer, grades, hardly affecting the proportion of women holding senior lecturer and professorial posts. Their share of SLs for example, has stayed at roughly 6 per cent over this period. But the high, below the lecturer scale, which has now increased to about a third, is very notable. It suggests that many women are routed into temporary, less well-paid posts which do not lead to permanent academic positions.

The recent rapid rise in women graduates might well be reflected in time in increasing numbers of women academics. But more such will be necessary lead to a greater share of senior posts; and here the situation of women university administrators provides an instructive comparison: Women account for about a quarter of all university administrators, twice as high a proportion as academics. Yet their share of senior jobs is no better, despite the fact that woman constitute well over a third of Grade 1A administrators, the basic recruitment grade. And the familiar pattern of undue concentration in the lowest grade reappears: women form over half of the staff on grade 1B, the most junior academic-related administrative scale.

AUT

Why do they tend not to get promoted? One major factor must be the natural wastage which occurs with women leaving for domestic reasons, usually to start a family, at the very time when it is most important to establish a career path. Women form about 40 per cent of university administrators in their twenties but this proportion drops to 24 per cent of administrators in their thirties. Even so, this cannot account for the extent of their under-representation at more senior levels.

Household and domestic commitments, being uprooted to follow a husband's job (or, conversely, lack of mobility), and the difficulties of combining a career with bringing up a family all contribute to this under-achievement. Possibly it is slightly less difficult for the academic with her more flexible work commitments and this may account for her better promotion chances once she has her foothold in the profession.

It is also often said that women do not apply for promotion or do not want it. In the absence of concrete information about applications it is difficult to assess the truth of this although the recent study on school teachers tends to refute this cliche. What we do know is that somehow or other women tend to start off, and end up, doing the administrative jobs which are not in the mainstream career path—accommodation and personnel work for example, or departmental administration, rather than central administration. Do they get encouragement to broaden their work experience, to undertake more training, to plan systematically for their careers?

There is at present sparse recognition, in the way workplaces, including universities, operate, of the fact that nowadays must women face a working life stretching over thirty years—and that provision should include not only such measures as child-care facilities and better maternity conditions but also more flexible attitudes to work arrangements, better training and retraining facilities, and getting to grips with the problems caused by the conflicting demands of family and work at the most crucial period in career terms.

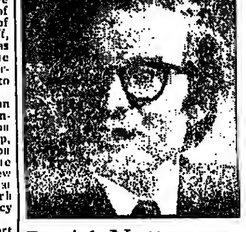
The AUT hopes that its Code of Practice on Equal Opportunities will be adopted by every university.

AUT would like to see a permanent committee on equality of opportunity in each university, reviewing annually applications and appointments in academic and related posts; the rule of promotion and level of pay between men and women at comparable stages; ensuring that matters of marital status or family arrangements are not the focal point at appointments and promotion interviews; and considering general areas such as into or re-entry into the profession.

Tina Day

The author is assistant general secretary of the Association of University Teachers.

The bitter irony of Gill's typeface



Patrick Nuttgens

"Strict Delight" was the title of an exhibition of the life and work of Eric Gill which has recently finished at the Whitworth Art Gallery of the University of Manchester. It was organized and designed by the students and staff on the gallery and museum studies course at the university and it was a delight, not perhaps as strict as Gill might in his tougher moments have demanded, but a delight all the same. The number of people, young and old, who filled the gallery and explored those strictly organized drawings, obviously thought so too. It was an overdue recognition of the work of this draughtsman, carver, designer and writer who died young, at the age of 58, and had done enough work to satisfy three or four ordinary energetic men.

It was all the more exciting for me because Eric Gill was the most memorable and certainly the most venerable figure of my childhood. It was purely an accident that we lived at the bottom of the hill on top of which were his studios and the homes of his extended family at Pigotts in the Chiltern Hills. Later we moved to the top of the hill and were neighbours, if that is not too sedate a term for a strange and sometimes drastic relationship.

Across a few fields were Gill's ranges of buildings grouped around a former farmyard and full of people drawing, sculpting, typesetting and talking. There was a pig in a house in the middle of the courtyard under a big tree and chickens and an odd collection of decrepit dogs lurking hopelessly around and probably thinking of an early release.

My earliest recollections of Mr Gill were of attending, from about the age of three, the chapel in the long wing that contained his studio, where we went for mass on Sundays. It was down some wooden steps and had whitewashed walls and a brick floor. Members of the Gill family sat in front of a wooden screen, hurriedly slipping down the steps from the house at the last minute. When the simple altar was moved out from the back wall, we children sat in a row behind it, sometimes giving a commentary, to the acute discomfort of visiting priests ("Now he's lifting up the host . . . now he's going to eat it . . .").

There were strange episodes. I remember David Jones serving mass and getting everything fearfully wrong to our endless delight. A later memory is of a visiting priest who got more and more hysterical under our unwinking gaze as the mass dragged on: "A dreadful experience", he remarked when he got back to his monastery. The resident priests were usually scholarly, rebellious and unwonted in their own dioceses. I served the daily mass of one of them for several years before realizing that the reason he was so difficult to get out of his bed in the morning was that he had the most terrible hangover. But in earlier years—and this is what I am slowly getting round to saying—the Sunday Mass we served by Eric Gill himself, and that was where I saw him first.

Although later it became as familiar that it was a matter of no curiosity or interest, that fact is that my first recognition of Gill was of a man who did not wear trousers. He wore instead a grey smock that came down to his knees and was gathered round the neck. On weekdays he wore knee-length grey stockings; on Sundays he wore red ones. He wore sandals tied round the ankle and his smock was held in place with a cord or sometimes a leather belt. When he went out or was sculpting he wore a black beret. At other times he wore a home-made paper hat.

His attitude to trousers (see his essay on "Trousers") was of course quite logical. The tunic he considered the best garment for both men and women, though he is said to have considered the ideal clothing for men to have been the Roman toga with long skirts and flowing draperies—"clothes fit for meditation and the life of thought and gentle occupation". Oddly enough none of his family followed his example.

Rumour had it that his costume landed him in difficulties, though the embarrassment became so it is impossible to think of him ever being embarrassed. He was said to have turned up to speak at a dinner at the Dorchester and been thrown out by the doorman, a richly costumed flunkey who came to think of it must have been much more absurdly dressed than Gill, who had to find a telephone box and ring for someone to meet him and get him in. He never compromised on what he regarded as clothes fit to reflect the dignity of man. Even in my childhood days I had recognized that skirts were much more appropriate for men and trousers for women, as civilizations other than ours and other periods of history have recognized. The Scots have always accepted it.

But it did give locals the wrong impression. I suppose they would have thought my collection of oddities on a holiday in a pretty farouche in the home counties, but Gill's costume confirmed for them that the place must be a hotbed (to use a somewhat inflicitous phrase) of free love and immorality. People looked at you nervously and seemed to think that you would not know who your parents were. I dare say there must have been some ordinary immorality but it certainly was not obvious to one's sheltered lives of what would nowadays seem quite eccentric purity. Sinfulness was more likely to have started with opening a bottle of beer than pulling off somebody's knickers.

You might think that I have got stuck on the subject of trousers and am therefore giving a false impression of Gill. I should have concentrated on his artistic and literary work. But not all the great quiddities of Eric Gill was his belief, and still more his carrying out of the belief, that life is a great unity. In his artistic work, he was prepared to state that it all adds up to a totality that is total only under God and subject to eternity. In one of his essays, on "Education for What?", he insists in the end that "culture, if it is to be a real thing and a holy thing, must be the product of what we actually do for a living—not something added, like sugar on a pill".

That what we actually do for a living should be a key to culture, to civilization, to life, is surely something we are coming round—belatedly—to recognizing in our educational system. Eric Gill is immediate to us, not just because of his designs or his curiosities in an age that tolerates for such oddities, but because his fundamental convictions about art and life are at last coming home.

He had a belief in the overall significance of the arts that is best illustrated by his attitude to the arts and crafts movement. He believed in its basic aims—the design of beautiful and fitting things for everyone—but recognized the irony of that position (like the irony of William Morris's with the same aim) that in the end the only people who could afford beautiful hand made things were the rich.

The ultimate irony of Gill's own life and work is that his major contribution to the life and environment of everyman was something that he had to be argued into—his work in typographical design. Stanley Morrison, advisor to the Monotype Corporation, persuaded him to design his first typeface in 1925. That was Perpetua. There followed Gill Sans which has affected typography as well as public lettering ever since, Jessica, Solus, Aries, Jubilee and Bunyan.

It was an offence against his most deep seated convictions because the designer was no longer the maker. He left some great sculptures, some beautiful erotic drawings, some lasting ideas. But it was his lettering and typographic design that changed the daily world. In an activity with which he was never quite conscientiously at ease, he ultimately fulfilled and gave effect to his own ideas.

Laurie Taylor

"Item 17, gentlemen. The Appointment of a new lecturer in the department of communications. Before we get down to details here I think it appropriate that we recall the tragic circumstances which led to this vacancy by minuting the deep distress felt by members of this board in hearing the news that three senior members of the communications and mass media department staff had been assassinated by *unknown assailants* at this year's annual conference. Perhaps you will agree with us that this might also be the right time to express the wish that there should now be a halt to all these well-intentioned but ill-judged remarks by members of this university which help to perpetuate the rumour that these cold-blooded slayings were carried out by a highly trained hit squad of unemployed research fellows.

"But to more pleasant matters. Although these are, of course difficult days for academic appointments, the high standing of the department nationally and internationally is, I think, well demonstrated by the exceptionally high number of applications for this bottom-of-the-scale-two-year-tenured-with-no-possibility-of-renewal post. As you know the final date for submissions was yesterday, May 15 and by then we had received 4,150 applications.

"I find it a matter of some regret that a majority of these, and it would seem that word, minority, contained what I believe in commercial circles are described as "considerations". There was, for example, a number of banknotes, some book tokens, a £20 Augustus Barnett gift voucher and an unfortunate photograph showing a relatively young candidate in a state of almost complete undress bearing the distasteful legend 'all yours duckie' for a piece on the shortlist.

"You committee is now busy applying the agreed formulae using the preliminary sort which, you will recall, automatically excludes all those who have published less than 20 major articles and no more than two significant books. Where significance has been in dispute we, for example, in those cases where a favourable review in the *Spectator* has been counterbalanced by a highly critical notice in *New Society*, have had the decision as to whether to retain the candidate has been made by the necessarily expedient, but one hopes commendably random technique of throwing the applicants' forms into the air and giving a favourable vote to those which land face upwards.

"The application of this range of techniques has so far enabled us to exclude 120 of the candidates leaving a residue of 3,938. We're now halfway through the next stage, the socioeconomic test in which, you will again recall, candidates are ranked according to gross need, with years of academic unemployment, number of dependents and amount of personal savings taken into account.

"We believe that the operation of this third criterion, humanitarian test, which of course owes so much to ACAS intervention, will leave us with approximately 500 candidates all of whom will be in a state of extreme need.

"From that point, I think, it's pretty plain sailing. Comprehensive medical tests and then straight into the three days of unarmed combat between applicants in the university gymnasium. Just one small point here on which your committee would like guidance: is it agreed that we are proceeding in the most equitable and responsible fashion by insisting that the criterion for successful selection at this stage should be three falls and one submission?"

LETTERS TO THE EDITOR

Case for a university in Cyprus

Sir,—The case for a university in Cyprus is undoubtedly strong, and John Eggleston's article (*THES*, May 2) puts the economic and cultural arguments forcefully. However, the political case that he states in his claimed in your headline ("a university . . . would help unite the divided isle"), but that of "the need to reaffirm a new national identity in the sector of the island that remains independent after partition".

This may be realistic from the viewpoint of the Greek-Cypriots who in practice have constituted the "Republic of Cyprus" since the de *facto* partition of the island created by Turkey's military intervention in 1974. But it ignores consideration of the needs of the Turkish-Cypriots living in the northern part of the island. Despite their possession of a disproportionate share (in relation to population) of agricultural and tourist resources, no comparable economic development to that of the Greek south has yet taken place. Development of tertiary education also lags behind that in the Greek-Cypriot sector, and opportunities for overseas study have been almost exclusively in mainland Turkey.

If, as many Greek-Cypriots are persuaded, Turkey is determined that northern Cyprus shall remain the equivalent of a province of her own nation-state, then, in the context of present international political realities, there is little point in considering strategies for the re-integration of the island. If, on the other hand, the self-styled "Turkish Federated State of Cyprus" is truly committed to restoring Cypriot political unity, then a Cypriot university should be planned not merely in relation to Turkish-Cypriot needs (as well as Greek ones), but also as an agency aimed to forge and sustain some genuine sense of Cypriot identity. Whatever way a new federal constitution is framed, there will need at least to be a class of political leaders, administrators and professional workers who can communicate, cooperate, and above all develop and articulate a sense of common purpose for the new state. Over time a Cypriot university could play a major part in bringing together the currently estranged leaders and youth of the respective ethnic groups.

Of course, there is also the risk that a pluralist university combining both Greek and Turkish students could become a crucible of renewed ethnic antagonism, and thus defeat its own ends. On the other hand one must remember that it was the maintenance, throughout the period of British colonial rule, of two separate and nationalist educational systems that is in large part responsible for the present chauvinistic perspective of each ethnic community. To establish a Cypriot university that can overcome such divisions will therefore indeed require massive international backing, as John Eggleston concludes. It is essential that the plan confronts the political realities as well as other needs. In view of her continuing implication in the present Cypriot crisis, Britain, in particular, should be providing initiative and support for such an enterprise.

Yours faithfully,
DR ROBIN OAKLEY,
Department of Sociology,
Bedford College, London.

Affirmative action

Sir,—Jennie Farley's article on affirmative action in American universities (*The THES*, April 24) is misleading. It gives the impression that American universities are made up of reasonable men who, while shown the error of their ways, will make sincere attempts to correct the imbalance of female faculty members. Ms Farley cited Brown University's affirmative action procedures, which include a "Consent Decree" binding it to follow the decisions of a special monitoring committee. But recent events at Brown suggest that the university is trying to bend not of its obligations under federal law, and where Brown leads other American universities may well follow.

The case at Brown concerns a newly established Henry Luce chair in comparative development studies. It was advertised in June, 1978, and a short list of three candidates was drawn up by the department of sociology sitting as an appointments committee. The department recommended that each of the three candidates be offered the post in turn. The first two chosen candidates, both were men, turned down the post. The third chosen candidate, a woman, was never offered the chair because the chairman of the appointments committee and the dean of the faculty in question then changed the rules. They decided that the whole short list had been *ultra vires* because the appointments committee had voted by a unanimity of voice and not by secret ballot.

The woman candidate is Dr Amy Seidman, well known in Britain and Africa for her many publications and activities in the field of development studies. As an economist with a strong interest in sociology she was considered eminently suitable by the appointments committee for the interdisciplinary costume of the new chair, and for its concern with the Third World as well as with the west.

Brown tried to offer the post to Seidman on an one year visiting basis, but the Luce Foundation vetoed this proposal. The university then reopened the search for a new candidate. At this stage the university's affirmative action committee stepped in. After a number of hearings and deliberations the committee found that Brown had violated its own affirmative action "Consent Decree" previously placed on by a federal court. Meanwhile the university has appealed to another federal court and gone ahead with new selection procedures thus putting the case on Seidman herself to stop it.

Feminist observers in the United States see the Seidman case as Brown as very important in its implications. It could be for sex discrimination in education what the Bakke case, concerning a white medical student in California, was for race discrimination. It is clear that Brown University is trying to buck its obligations under federal law and is prepared for a long and expensive legal wrangle in order to achieve that. The perpetuation of male domination in United States academic life is far from over. Seidman's case shows that it is fighting back with all the resources that great institutions can bring against individual women professors.

Yours sincerely,
Dr A. A. CRAVES,
St Antony's College, Oxford.

Splitting hairs

Sir,—I much prefer Greg Brooks' interpretation of "trichotomy" in terms of hair cutting and hair splitting to my own (see his letter in *THES*, May 2). But perhaps the more pedestrian usage should not be expelled with bell, book and candle.

The roots of "dichotomy" are indeed *dicha* and *tomio*, but Liddell and Scott give "in two" as the primary meaning of *dicha* and Dr Brooks' usage as secondary. Further, Aristotle uses *dichotomeo* to mean "divide in two". Corresponding to *dicha, tricha* ("in three parts") is an adverb with respectable Homeric ancestry. "Trichotomy", understood as "a division into three parts", thus seems a not unreasonable construction.

It is not, however, a "neologism". The *OED* provides a genealogy going back to 1610. In recent times, Professor Strawson's attack on the "trichotomy" of: "either true or false or meaningless" is known to every philosophy freshman who has *followed the varying fortunes* of the present king of France.

MARTIN WARNER,
University of Warwick.

Sir,—I can assure Greg Brooks that long before anyone produced "trichotomy" in English ancient Greek mathematicians used *trichotomein*, "trisect", on the analogy of *dichotomein*, "bisect". Not surprising, since *trichin* and *trichai*, "three ways", co-existed with *dichia* and *dichai*, "two ways". For sure, *trichotomein* could also mean "cut hair"; but in a mathematical context there was little risk of misunderstanding.

Yours faithfully,
SIR KENNETH DOVER,
Corpus Christi College, Oxford.

Sir,—Mr Greg Brooke is splitting imaginary hairs. *Tricha* "in three parts" is a perfectly good Greek word (already in Homer), and *trichotomein* exists in the meaning "to cut in three" as well as to "to cut hair". *Dichotomein* means normally only "to cut in two". So far as English is concerned, *trichotomy* is no neologism; but is well attested from as early a date as *dichotomy* (1610 according to the OED), to which it is specifically opposed.

Yours faithfully,
PROFESSOR W. S. ALLEN,
Trinity College, Cambridge.

Justice Bill

Sir,—Governments will seek to minimize opposition to their measures. But Lord Mackay is being a trifle disingenuous when he says that opposition to the Scottish Criminal Justice Bill is directed not the earlier clauses on police powers and judicial examination (*The THES* April 18).

Among the Bill's total clauses are proposals:

● To reduce the number of permitted peremptory challenges to jurors from five to one (in a system which unlike in England and Wales works on eight to seven bare majority verdicts);

● To allow trial in absentia where he is "misconducting" himself in court. Even the present Solicitor-General for Scotland, Nicolas Fairbairn MP, described this—when in opposition—as "horrific", and "a breach of natural justice".

● To authorize retrial when conviction is set aside at appeal: One may in other words now be tried twice for the same offence.

● To permit the prosecution to bring new evidence, contradicting the defence's, after the defence case is finished. Nothing in the Bill would stop such evidence coming from prosecution witnesses, including police officers, who had been in court to hear the defence case after giving their own evidence.

These are hardly the merely "technical" reforms of criminal procedure proponents of this Bill suggest. They are fundamental changes in Scots law, and have been widely opposed here.

Nor are the Bill's plans to stop football hooliganism uncontroversial. The Bill makes it an offence to possess alcohol or any container capable of holding it at designated games. Some of us feel existing law provides adequate powers to deal with those who are drunk and disorderly, in breach of the peace, and that to criminalize ordinary people and innocent activities in the supposed interests of prevention is a dangerous and probably counter-productive precaution.

This Bill needs to be seen as a package, which consistently tilts the balance of justice in favour of police and prosecution. Many of us who oppose it oppose it exactly as such a package, and know exactly what we are doing.

Yours faithfully,
Dr DEREK SAYER,
Dr JASON DITTON,
University of Glasgow.

Bath Academy of Art

Sir,—Unless there is a clear statement from the Council of Avon on the cost-effectiveness of the proposed merger of the Bath Academy of Art with Newton Park College of Higher Education, we are threatened with yet another bureaucratic blunder. If efficiency and progress are the aims of this endeavour, then some efficiency and progress might surely be expected from Avon in the presentation of their case.

Yours faithfully,
MICHAEL KIDNER,
Artist, and Visiting Tutor, Bath Academy of Art,
18 Hampstead Hill Gardens,
London, NW3.

Relationships

Sir,—It is odd to have to write a comment about a book review with which one is in complete agreement. I share Rudolf Schaffer's view (*The THES*, April 24) that Robert Hinde's book *Towards Understanding Relationships* is "splendid and timely". Schaffer is also entirely right when he identifies the major difficulty of social psychology as having been in the past more "individual" than "social" and when he attributes this to "the use of concepts borrowed from the study of individuals". The strength of the work of Hinde's book is in his well-documented insistence that, to quote Scheffer again, "the interaction between two individuals cannot be derived from the sum total of the characteristics of these individuals".

It is not true, however, that—as Schieffar wrote—"for some time now social psychology has been going through a crisis of confidence". The crisis is over. In the late 1960s and early 1970s we had a flood of "crisis" literature and a great deal of soul-searching which was amply justified. For quite a few years now, the soul has been giving healthy signs of having emerged from the long tunnel that our higher education in the public sector. The work is not in any way comparable (I have also taught in further education, so I know) with the higher education scale should be exactly the same in the career grade as the university one, with equivalences as far as possible established for higher posts.

Furthermore there should be a single union for all university and other teachers working at degree level and above. Present divisions, rivalries and invidious comparisons based on lack of knowledge only damage the cause of higher education as a whole.

Yours faithfully,
TIMOTHY COOK,
Lenten Cottage,
Lenten Street, Alton, Hampshire.

Social relationships are, in Schaffer's words, "influenced by the nature of the social setting in which they occur—the family, the peer group, the culture, or whatever other type of social nexus is chosen". This "social dimension" of social psychology is now richly and increasingly expressed in a *diversity* of viewpoints, methods and formulations of research problems. There is a new confidence of which I recently had an excellent example. Some time ago I wrote a circular letter to a number of colleagues in this country and abroad suggesting that we should put together a book which would reflect substantive developments arising from this growing awareness of the simple fact that social psychology is social. A publishers' contract would thus legalize our de facto divorce from the older individualistic perspectives. It took no more than a few weeks to receive synopses for about 30 chapters on a vast range of research topics. This is hardly a symptom of a continuing "crisis of confidence".

Yours faithfully,
RHEM HARRE,
Professor of Social Psychology,
University of Bristol.

Clegg's two scales

Sir,—The "advanced further education" you refer to in your editorial on Clegg (*THES*, April 25) does not exist. There is further education and there is higher education.

"Advanced further education" is a phrase invented by management and those educational trades unionists who, for obvious reasons, do not want to see financial justice done to lecturers teaching degree and post-degree courses in the public sector.

The level of work I am engaged in and the average quality of student I teach, are in what infarlor to those at the university where I held a tenured lectureship for six years.

Professor Clegg is right. There should be different scales for further and higher education in the public sector.

Social relationships are, in Schaffer's words, "influenced by the nature of the social setting in which they occur—the family, the peer group, the culture, or whatever other type of social nexus is chosen". This "social dimension" of social psychology is now richly and increasingly expressed in a *diversity* of viewpoints, methods and formulations of research problems. There is a new confidence of which I recently had an excellent example. Some time ago I wrote a circular letter to a number of colleagues in this country and abroad suggesting that we should put together a book which would reflect substantive developments arising from this growing awareness of the simple fact that social psychology is social. A publishers' contract would thus legalize our de facto divorce from the older individualistic perspectives. It took no more than a few weeks to receive synopses for about 30 chapters on a vast range of research topics. This is hardly a symptom of a continuing "crisis of confidence".

Yours faithfully,
RHEM HARRE,
Professor of Social Psychology,
University of Bristol.

NUS stardust

Sir,—While I agree with the leader of *The THES* (April 25) that the winds of change have not yet blown the stardust out of the eyes of the NUS (I was at the last conference myself and can testify to this being the case) it is surely true that what ever the student movement does it is damned for on the one hand being a "rent-a-crowd" and on the other for losing the traditional student idealism, a move which older generations observe with horror since it suggests that their own cynicism might be valid.

Yours faithfully,
TIMOTHY COOK,
Lenten Cottage,
Lenten Street, Alton, Hampshire.

Letters for publication should be as short as possible and should be written on one side of the paper only. The editor reserves the right to cut or amend them if necessary.

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The reaction to Flowers

The know nothing reception given to the Flowers report on medical education in London was no doubt predictable. But it is still very depressing — not because the Flowers committee got everything right (it didn't), but because its critics have failed abjectly to propose any constructive alternative. Indeed from the tone of many reactions one would conclude that there was no problem in the first place, and that nothing at all needed to be done about arguably the most hidebound sector of all British higher education, a large number of small highly conservative units with over traditional curricula, absorbing probably an unfair share of the resources available for higher education in London, and rapidly running out of patients as the balance of National Health Service priorities is shifted towards the provinces. Instead we have been treated to the all too familiar stratagems of defence in depth — administrative obscurantism, emotional appeals to reactionary tradition, simple job protectionism, calls for mind numbing consultation, plus, of course, the usual private and therefore deniable innuendo.

Three aspects of this largely negative reaction to Flowers deserve to be emphasized. They are in ascending order of generality: the case for the reform of medical education in London, on educational more than on economic grounds is still undebated; the Pavlov-like objections to all and every "cut" in underfunding the general case for higher public spending; and a new symptom of the chronic British disease seems to be that all change is *immediately* and massively rejected by the body politic and gobbled up like bacteria by white-cell special interests.

The first of these aspects is the most immediately relevant. The debate that has followed the Flowers report has been conducted in the entirely myopic terms of closing Westminster Hospital medical school and merging others even more famous. The much broader issue of the reform of medical education that these changes would have facilitated has been forgotten. Yet the curriculum in some London medical schools is very out of date. There are far too many small and barely viable departments hermetically sealed from each other and there are very important (for the community) but less attractive (for doctors) areas of medicine for which little teaching provision is made in some cases.

It is difficult to escape the conclusion that if the structure and organization of medical schools in London was more up to date the medical education they provided might be more up to date as well. Certainly it is difficult to imagine that some London practices and patterns could have survived in the new provincial medical schools. To argue in this way is not to suggest that the detailed solutions proposed by Flowers are all correct. For example, many people will doubt the wisdom of building a new organization of medical education around large district teaching hospitals which inevitably concentrate on high-technology medicine. Nor is it to suggest that Westminster should be closed rather than some other schools. But any defence of the Westminster must really be mounted in terms of what it does now not in terms of its tradition.

The Flowers committee may have been implicit in its enthusiasm for abrasive analysis and for new and unfamiliar names, but the six-school structure it proposed does look essentially right. Lord Annan may have been impolitic in his apparent zeal for uniformity and reassurances on redundancies. But these defects hardly begin to add up to the case for retaining the present structure of medical education in London unchanged.

The second aspect of the reaction to Flowers has reverberations far beyond medical education. In some sections of the Left and of the public sector a Verdun-style mentality seems to be growing up according to which no cuts are acceptable, however undeserving a threatened service may be of general support.

So each and every of London's medical schools, which taken together far surpass Oxford and Cambridge in their conservatism, must be defended against harm. This mentality has two flaws. First, unlike the German besieging Verdun, the Tories will pass—at least until 1984. Secondly, the real case for higher public spending, the one which will finally convince the voters of Britain, must be built on practical demonstrations that it can be used creatively and flexibly to improve the quality of our collective life. Sadly, at present, any campaign against the cuts seem to *confuse the people's interest* with sectional interests, however large, so they tend to undermine this case. Mr Neil Kinnock, Labour's spokesman on education, has been trying to get this message across by his refusal to promise that all and every cut will be reversed, but he has been rewarded for his intelligence with accusations of backsliding.

The third aspect is perhaps the most worrying of all in the long term. Year by year it seems to be more difficult to make changes in Britain. While the French build a new Paris airport, in Britain where the need is manifestly for greater we are back to square one again with Stansted. The plans for a new British Library are sniped at by Hugh Thomas and his friends (so far without success, but only a fool would be confident). Motorways grind to a halt in front of massed objectors. We seem to be becoming a truly immobile society and to inequality is sustained in two important ways: the present generation benefits from the progress made (and suffered) by previous generations but is not prepared to make much progress for the next generation, and the privileged (like London medical schools?) conduct successful defences while the less privileged (like the colleges of education?) suffer even more. For in the end there is an iron law of necessity that cannot be avoided. If decisions are not taken in time, time will take them for us.

Mrs Thatcher's first year

The Conservatives have now completed their first year in office and Mrs Thatcher herself has been rewarded by almost hagiographic tributes in much of the press. So it is perhaps appropriate to examine the Government's record in higher education. The first thing that has to be said is it is not going to be the subject of similarly glowing tributes in *The THES*. The impact of Conservative policy on universities, polytechnics, and colleges, has been negative and destructive. But, then, in terms of present Conservative philosophy that is perhaps an achievement rather than a failure. After all, the public sector, that malignant obstruction, was to have been squeezed so it is only natural that a few pips have squeezed.

Yet an assessment of the Conservatives' first year must not end there. In spite of the prophecies made a year ago and frequently reiterated the sky has not fallen. The university grant for next year is almost generous, and the evidence is strongly accumulating that the effects of the rise in overseas students' fees will not be as great as was originally feared. Polytechnics and colleges have been squeezed hecder. But even here the squeeze has been the result of clumsiness in capping the pool rather than of any deliberate policy to make savage cuts in their income.

Indeed, to be fair, the cuts that have been made since last May have been no more severe than those made during the IMF-inspired deflation of the mid-1970s. Of course, the much larger cuts of 1975 were made under duress and the Labour Government subsequently struggled to restore them, while the more modest cuts made by the Conservatives have been made willingly and are unlikely to be restored. So the prospects for the next three years on balance are bad as they were in 1975-78. But probably no worse. Most informed observers believe that this Government has already done as much active damage as it has the political stomach for.

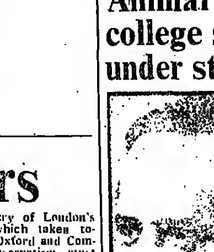
No, the real criticism of the Conservatives' record is not that they have made cuts, but that they do not cord. Higher education is very low on their list of priorities. They have nothing against it. Indeed, Dr Boyson, who has not turned out to be quite the ogre his opponents feared, has few active criticisms to make. He has even warmed to the Open University. But he and his colleagues in the end are not very interested. Higher education, like much of social policy, has faded into the background. The Soviet Union, law and order, the unions, are what the Conservatives are really interested in.

There have been two unfortunate results for higher education. The first is that no substantial action has been taken on a wide range of outstanding problems, which there will always be even in well-regulated sectors like higher education. It is this policy drift rather than deliberation to make savage cuts which has caught the polytechnics. If this drift continues, problems will accumulate, tensions will increase, inefficiency will grow. As with many other areas, like the Leavisite concerned about values of mass society, or a socialist opposed to the values of materialist society, to feel that more is at stake with Mrs Thatcher's Government than a few millions of public expenditure.

The second is that the indifference of the Government is all too likely (and correctly?) to be interpreted as philistinism or even contempt for intelligent values. This, of course, would have a deeply demoralizing effect on universities which as institutions exist to promote such values. But far more is at stake than money or even morale. The attitudes and performance of Mrs Thatcher's Conservatism seem to express philistine and materialist values, to place the rich society before the good society, in a way that many people far beyond the boundaries of the organized Left find deeply worrying. Equally the TUC, in last week's Day of Action, expressed, fluidatally and fumblingly perhaps, quite opposite values, morelistic, collectivist, service rather then achievement oriented, even utopian. The TUC seemed to be placing the good (but maybe less efficient) society before the rich (but probably unkind) society. It is the Utilitarians versus Blake's Jerusalem.

Whether the relationship between those two networks of values should be a dialogue (as it was between 1945 and 1970) or a confrontation (as it has slowly become since 1970), is a relationship in which higher education must be actively engaged. It is not simply that it is firmly part of the public sector, or that it can never be quite comfortable as the R and D division of Great Britain Ltd. It is that higher education has a responsibility for the preservation of cultural standards. One does not need to be a Leavisite concerned about values of mass society, or a socialist opposed to the values of materialist society, to feel that more is at stake with Mrs Thatcher's Government than a few millions of public expenditure.

Animal House college system under strain



Steven Muller

A deep flaw in the United States educational system, so deeply buried near the core as to have long been invisible, is now becoming apparent. As the overmore intense glare of public scrutiny, provoked by the need to limit expenditures and by discontent with its merits, plays on every facet of American education, the surface of the flaw has appeared as the transition from secondary to postsecondary education.

At this transition point, two disturbing phenomena have been identified. One involves recognition that secondary school leavers are less well educated—on average—than were their predecessors several decades ago. The other concerns increasing scepticism about the purpose and virtues of the undergraduate curriculum. In most people's minds these are two separate problems, one for the schools and the other for higher education, sharply separated by the border between secondary and postsecondary education. But I perceive both as evidence of a single flaw, which can be identified only by a deep probe into the very origins of the whole structure of US education.

In its beginnings it depended on practices transplanted from Britain. There were tax supported schools for children, and colleges in the British tradition to provide higher education for future professionals. Because there was initially no general expectation of higher education for those who left the tax supported public schools, private preparatory schools were founded to educate those who did expect to gain entry into the colleges. From the colonial period until the middle of the nineteenth century, this remained the prevailing essence of the whole system, which of course did in the meantime spread from the original colonies across the entire continent.

As America became more industrial, significant innovations were made. New types of collegiate institutions were established to train professionals in engineering and agriculture, for example, and to train larger numbers of teachers for the schools. In many of the newer states of the union, state supported institutions of higher education were founded, at first because no private colleges existed or could be created speedily enough, and also because the close connexion between religious denominations and the original private colleges seemed much less relevant. Expectations began to grow that graduates of the publicly supported schools would enter the publicly supported colleges. The name university became commonly for the evolving collegiate institutions with overtone varied purposes, but the emphasis throughout was on teaching rather than research or advanced study.

By the time of the American Civil War, several generations of young scholars had been migrating to Germany to finish their studies, and the notion of the doctorate as a research degree was perceived evermore as a need. The founding of the Johns Hopkins University by Daniel Coit Gilman in 1876, specifically as a university on the German model committed to advanced teaching and research, was the symbolic act which initiated the rapid evolution of the modern American university system. It also initiated the deep flaw that is only now becoming apparent.

Gilman's crucial decision was to pile the German model of advanced study on top of the preexisting collegiate system, rather than to replace one with the other. Gilman considered, but rejected, founding Johns Hopkins without undergraduates. In the context of his time, he was surely right. But from the legacy of his decision a vital flow has emanated. Gilman envisioned at Johns Hopkins a special kind of undergraduate collegiate education that would enable students to move towards advanced study as rapidly as possible. He did not foresee the four major developments that produced the present system and its flaw.

First, the undergraduate collegiate experience became more rigid rather than more flexible. Its four-year span became essentially universal, and by and large the great graduate and professional schools of the modern university sit on top of it. A whole civilization has grown up around the four-year undergraduate residential life span. (It may be noted in passing that Gilman himself opposed both university-run undergraduate residences and intercollegiate sports.)

Secondly, the academic thrust of undergraduate education has become insistently more professional. This is obvious where professional undergraduate colleges exist in fields such as engineering, teaching, business, agriculture, or architecture. But in the nonprofessional colleges of arts and sciences there is an equal tendency to the pre-vocational, be it the studies premedical, prelegal, pregraduate, or simply preemployment. The drive to specialize, as soon and as much as possible, pervades the undergraduate collegiate years.

Thirdly, and most significant, a vast tide of democratization, egalitarianism and homogenization has flooded American secondary education. Nearly all young people now have required access to the full twelve years of elementary and secondary education. The challenge was thereby to raise the performance of all to the highest possible standard. The result instead is an uneasy compromise on standards, not at the lowest common denominator, but at the highest generally attainable level.

There is some special opportunity, study for the most academically gifted beyond this level, and some remedial study for the least academically gifted below it. And to some extent, the private preparatory schools have similarly become more accessible, and may have made a similar accommodation in standards.

Fourthly, not a select minority but a slight majority of all school leavers now enter postsecondary education. The collegiate undergraduate experience is a mass experience. There is an excess of college graduates both in terms of the employment market for specialized training and in terms of access to graduate and professional schools. Today, as the number of school-attenders and school-leavers is declining, college and university institutions designed for an ever increasing mass intake are looking rather than raising their expectations for admission.

The deep flaw in this briefly sketched evolution is that the terminal years of secondary schooling and the undergraduate collegiate years are potentially redundant. In recent years this potential redundancy has become actual for a growing number of students. The responsibility for providing the uppermost stage of a sound general basic education is not effectively or clearly allocated either to the secondary schools or the undergraduate curriculum, nor rationally shared between them. Efforts of the placement reform at either the school or the college end of the problem are doomed to continued failure until the flaw that believes them both is, at least and at last, acknowledged and addressed. Gilman's pyramid of a German style university, atop an English collegiate a preparatory school model have endured for a selected minority of the most talented. But two rigid layers of mass secondary schooling and mass undergraduate education are now grinding against each other in American education. I hope to elaborate on this problem in my next column.